

Countries
of the World

FIFTH VOLUME



By Reef & Palm. A South Sea Glimpse

François 1. 1861. 1

COUNTRIES OF THE WORLD

Described by the Leading
Travel Writers of the Day

Illustrated with some 4000 Actual
Photographs of which about 1200
are given in Full Colours & in
Photogravure

Edited by
J. A. Hammerton

FIFTH VOLUME
Pages 2909-3628

New York to Siam



Published at THE FLEETWAY HOUSE London E.C.

VOLUME FIVE

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NEW YORK

The Second Largest City in the World

by Hugh Walpole

Author of "The Dark Forest," "The Cathedral," etc.

THREE have been so many brilliant descriptions of modern New York that it must seem a useless vanity to attempt to add to them. But every great city is created anew in the sight of the beholder, and for me New York is not one city but a hundred, consisting, not of streets and squares and gigantic buildings, but rather of isolated moments of astonishment and surprise.

Modern New York has this quality of eternal surprise more, I fancy, than any other city in the world. Of the cities that I have seen the six most beautiful are London, Paris, Petrograd, Venice, Florence and New York, and it will be noticed at once that I include in this little list no Eastern miracles.

I know the East so slightly that I would not dare to call my superficial glimpses anything more substantial than prophecies of future revelations, but of the six cities that I have named New York alone will have given me some Eastern prophecy, although it is in many ways the most Western city in the whole world.

The Spirit of Cities

And so it would be useless, I think, for anyone to attempt to catch the spirit of New York by an enumeration of streets and numbers, names of great buildings and the definition of districts. Of the other five cities certain names after a time breathe the very spirit of the place: in London, Piccadilly Circus, Gray's Inn, Chelsea; in Paris, the Tuilleries and Notre Dame; in Petrograd, the Field of Mars and the Nevski Prospect; in Venice, of course, the incomparable Piazza and the church of S. Mark; in Florence, the Duomo and

the Bargello; these names are familiar the world over and do represent definitely the very essence of their different cities.

In New York you have certain things, the first vision of the towering buildings above the waters of the bay, the rush and colour of Fifth Avenue, the strange excited whirl of Broadway at night, the tranquil recesses of Central Park, the old-fashioned desuetude of the old streets round Washington Square—these are familiar to every tourist.

An Impression of Light

And yet, neither singly nor combined, do they present New York at all; Broadway is Broadway, Washington Square is Washington Square, and New York is something quite other than these. In the first place, above and beyond everything else, I would say that New York is light.

This has been said so many times and in so many places that it has become a commonplace; but, although the traveller on his way to New York for the first time is expecting this and waiting for it, when he encounters it, looking out and down and up, perhaps from the twentieth floor of some gigantic hotel, he feels that here is something quite other than what he had expected, because here is light under unique conditions.

It is the light often of a brilliant sky, although there are cloudy and stormy days enough, but it is the light also that seems to emanate from the very heart of the buildings which, piled up almost at haphazard like the playful fantasy of some gigantic child, treasure their light in their hearts as though it were their most precious possession.

And indeed they may fancy it to be so, because their life is often so brief and uncertain that they may be said to belong to the air and to be part of it like the hurrying clouds. This, after the light, is the second thing that every visitor to the city must know, that the buildings are for ever rising and falling.

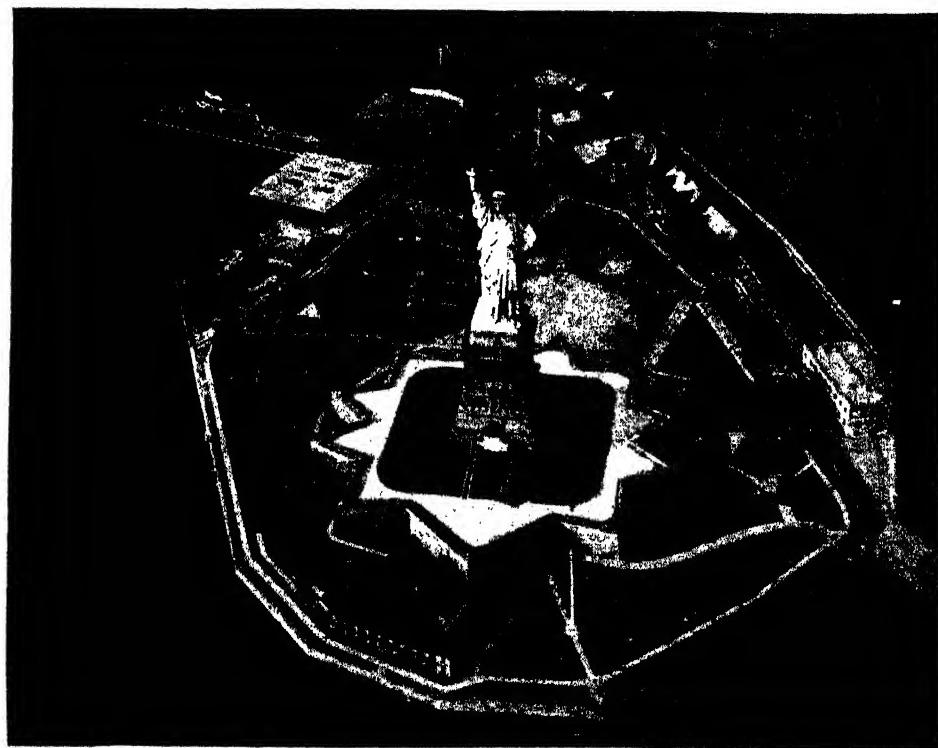
Whether you are in the rush and scurry of Fifth Avenue or in the arrested quiet of some street—77th say, or thereabouts—that hangs on to it, if you stop for an instant to listen you will inevitably hear the shrill motif of the electric hammer ringing out upon the clear air. That sound is the voice of New York, and it has in its ring something of the sharp clarity of the light.

There is a true story of the famous artist who, going into Fifth Avenue to make a drawing of some building, found one half completed exactly to his mind and planted himself in front of it, intending

to do there at least a fortnight's hard work. Leaving it for an hour for his luncheon, he returned eagerly in the early afternoon to find the whole building gone and only a dark cavern in the place where it had been.

There are, of course, the bones of the city that lie there without change. They seem to me, looking back at them, rather shafts that strike in their three parallel lines straight through the narrow strip of territory on which New York is built. The centre of these shafts is of course Fifth Avenue, and on the right of it as you go down the hill is Madison Avenue and on the left of it Broadway.

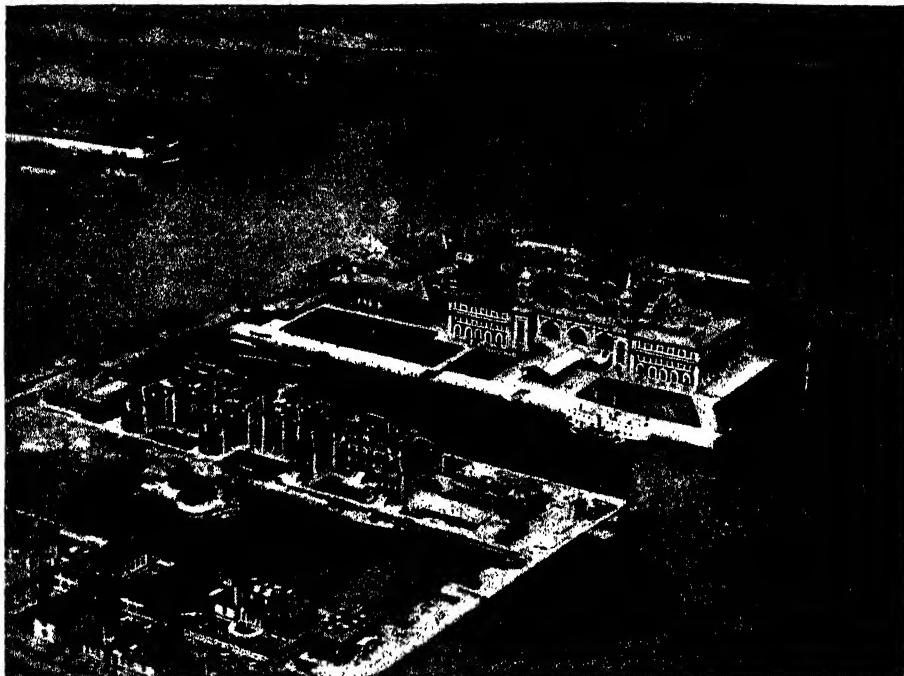
Naturally there are interruptions, broken into, often confused, and at the foot of the great hill they tumble into a multitude of small streets, the river and the East Side, but the visitor remembers them nevertheless as a basis of that strange, fantastic structure.



Aerofilms

STATUE OF LIBERTY ON BEDLOE'S ISLAND IN THE HARBOUR

Bartholdi, the French sculptor, originated the idea of this colossal statue in 1871, and it was dedicated in 1886. Its height, to the top of the torch, is 151 feet and the thumb is 12 feet in circumference. Inside the statue are lifts and stairways for ascent into the head, which can accommodate forty persons at a time. The torch and diadem are lighted by electricity.



Kadol & Herbert

VIEW OF ELLIS ISLAND FROM AN AEROPLANE

Flying up the beautiful New York harbour, the airman sees directly before him Bedloe's island with the lofty statue of Liberty. Beyond it, to the left, lies Ellis Island, containing the extensive buildings of the Immigration Depot. Immigrants from all over the world are landed at Ellis Island for examination by medical officers before obtaining permission to enter the United States

Fifth Avenue has its heart somewhere at 40th Street and the great, almost defiant, building of the Public Library. Here are many of the amazing hotels, the brilliant restaurants and the finest shops. You may imagine as you look down Fifth Avenue from the bottom of Central Park that here is a street like the Rue de la Paix or Piccadilly simply born to demonstrate the luxurious passions of mankind. Nowhere in New York does the light strike so brilliantly as here. The extraordinary straightness of the street, broken only by the little towers of the traffic controllers, gives you an incomparable vista.

During the day there are always multitudes of people, moving more swiftly it seems than the people of any other city in the world, and there is the strangest contrast between this hurrying multitude and the great stretch of motor-cars motionless and dormant like an army of "Wellsian" beasts waiting the word of some commander to advance.

The lights change in the towers and all the cars move forward, and then again a moment later are still, and at last, as you watch it, the effect of the power of machinery is so overwhelming that it is hard to believe in human beings at all, and the masses of people seem themselves to be automata controlled in some fashion of modern science by the superior forces of light and air.

In this part of New York I have never been able to be sure of my personal liberty. It is not only that the control of the traffic is so autocratic, but also that everyone who passes you moves so swiftly that you feel that it is almost criminal to have any personal identity at all.

Nevertheless, with a step or two, you can very quickly find your freedom again. There is nothing odder anywhere than that sudden change from the inhuman glories of Fifth Avenue to the shabby, very human minutiae of the streets that abut on it. Turning off



Aerofilms

THE METROPOLIS OF THE WESTERN WORLD

The magnitude and marvellous construction of New York City are best gauged from the air, for the striking rectangular arrangement of the streets is visible in its entirety at this height of 12,000 feet. Beyond Governor's island, Manhattan's long tongue of land is separated from Brooklyn and Long Island by East river, and from New Jersey by Hudson river on the west

from Fifth Avenue either to left or right you are almost certain at once to find yourself in some little mean street in which there is the shabby shop of an Italian barber, the demure window of some little dressmaker, the offerings of a tiny restaurant with its chilly eggs, slab of cold ham and quarter of fruit pie, and then at no long distance the ugly, grubby creaking mechanism of the overhead railway belonging surely to some period when railways were only just invented.

Of Fifth Avenue above 56th Street this is of course not true. There are the mansions of the great to the right of you as you go up, and on the left the green stretches of Central Park. I once stayed for some months in such a mansion, and when the iron gates had

swung behind you you were in a world entirely of your own, or rather of the generous millionaire who was your host. Complete silence here. This might be a gigantic sarcophagus embalming all the aspirations of the magnificent rich. Lifts move without sound to upper floors, and if a footman answers your summons it is as though he came to you with a finger on his lip.

Gazing through high doorways you see perhaps a hall with a musicians' gallery, marble statues, and in a corner near a vast fireplace a little melancholy and deserted table, and piled on it "Town and Country," "Harper's Magazine" and "Vanity Fair." But as you move upwards in the lift you leave these little signals of humanity far behind you.

My rooms, I remember, were at the end of a long floor that was, in the months when the season was at its height, converted into a garden and aviary. There was one long room that had down the middle of it a path of very fine sand. On either side of it, hanging from the ceiling, were empty cages of golden wire. When a little

breeze blew across the sand all the cages tinkled ever so slightly, and whenever I think now of these millionaires' houses in New York I seem to hear the tinkling of those empty cages and feel beneath my tread the soft pliancy of the sanded path.

In the season the character of the great house would be quite other. Fifty or a



Ewing Galloway

STATELY GOTHIC SPIRES OVER S. PATRICK'S CATHEDRAL

At the corner of 51st Street and Fifth Avenue rises the white marble structure of S. Patrick's Roman Catholic Cathedral. It is one of the largest and most beautiful Gothic churches in America. The edifice was begun in 1850, and not completed till 1879. The two fine spires are 332 feet in height, and the interior, with its modern stained glass windows, is elaborately decorated

hundred people would come to dinner, bands would play, choirs would sing from the musicians' gallery, and everywhere there would be a sense of noisy and careless life. But it was life that did not belong to the house, and I who had known it thus bare and deserted could only feel a deep pathos around it, an emotion quite unshared by my host.

Wires and ladders and terraces of metal stand out hideously against the blue sky, and in the streets below crowds seem shabby, out at elbows, and a little furtive; the numerous cinemas look, as they look everywhere in daylight, the cheapest prostitution of the decorative arts; photographs of famous actors and actresses smirk upon the



Ewing Galloway

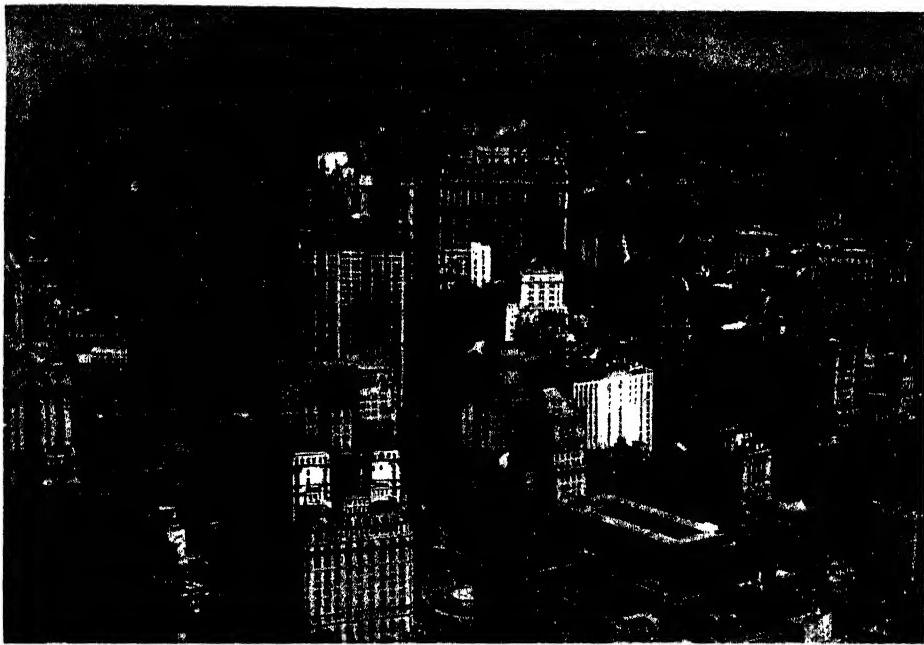
TRIANGULAR FLATIRON BUILDING AND MADISON SQUARE

At 23rd Street Broadway intersects Fifth Avenue, and at the point of intersection is the Flatiron building, 290 feet high. On the left, in the public gardens, stands the bronze statue of Admiral Farragut, and on the right an obelisk to the memory of General Worth. At the north-east corner of the square, and occupying a whole block, is the Madison Square Garden, a famous theatre

But how strange a sensation to plunge, as I often did, from that vast and pathetic silence into the mad hurdy-gurdy of Broadway. That is, Broadway by night. Broadway by day gave me exactly that same sense of pathos that the house had given me. You are conscious of a hideous mechanism that rises black and tawdry out of the walls and roofs of the houses like a creeping fungus, if I am not too grossly mixing my metaphors.

street, as though they were doing their best because they were forced to, but were thoroughly ashamed of themselves; and in and out of this theatrical lumber there are sweet shops, and barbers' shops, and incredibly degraded haberdasheries, and little restaurants, mean beyond belief.

Yes; Broadway by day and that millionaire's house have something truly in common, but whereas the house is never completely justified, how magnificently



Underwood

BUILDINGS IN THE CROWDED "DOWN TOWN" SECTION OF NEW YORK

In the right foreground is a square building round a court, which is the U.S. Custom House facing the Bowling Green at the end of Broadway. Just beyond the Custom House is the oblong building of the Produce Exchange. Broadway, which is probably the world's longest street, seems to have been cut through a brick-and-mortar forest. On the left is the overhead railway



Aeroflms

HUGE PILES OF THE WOOLWORTH AND MUNICIPAL BUILDINGS

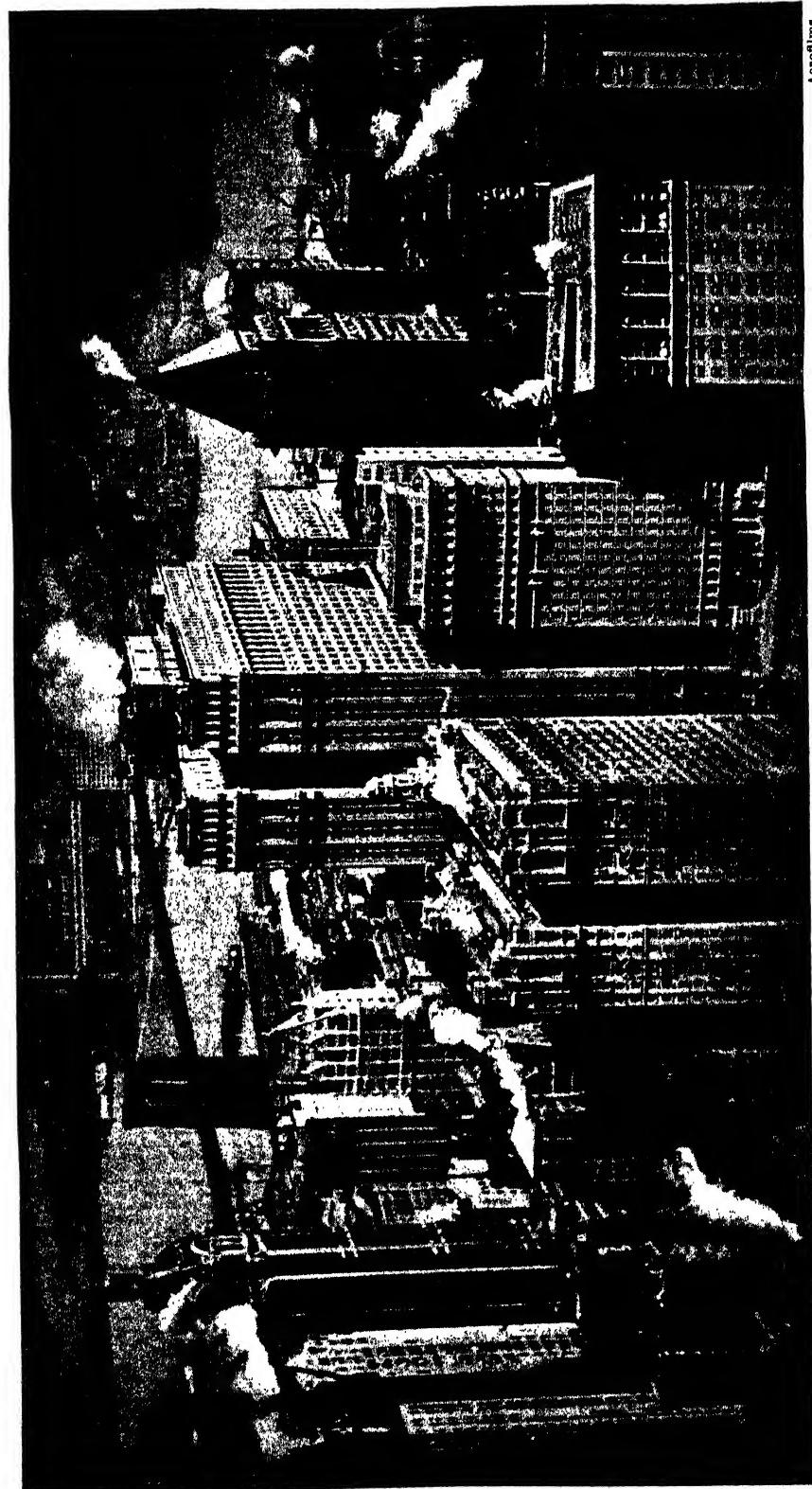
In the foreground is the colossal Woolworth building, on the western side of the City Hall Park, the tallest office building in the world. It contains 55 storeys and is 785 feet in height, while its lowest foundation is 120 feet beneath the level of the pavement. The municipal building is one of New York's finest skyscrapers, and here nearly all the city's business is transacted



Ewing Galloway

STRIKING SURVEY OF EAST RIVER, ITS DOCKS, SHIPPING AND MAGNIFICENT SUSPENSION BRIDGES

The boroughs of Manhattan and Brooklyn, here located on the left and right respectively, are connected by three bridges spanning the East river. The first is the New York and Brooklyn Bridge, a magnificent suspension bridge opened to traffic in 1883; the channel span measures 1,305 feet 6 inches from tower to tower and the total bridge length, with the extensions, 6,537 feet. North of the Brooklyn Bridge is the Manhattan Bridge, with a river span of 1,470 feet, while the Williamsburg Bridge in the far distance, the greatest suspension bridge in the world, has a channel span of 1,600 feet and a length of 7,200 feet between terminals.



Aeroflums

LOOKING TOWARDS BROOKLYN OVER THE GREAT CLUSTER OF SKYSCRAPERS ON BROADWAY

On the left is the sombre tower of the Singer building in the construction of which not a cubic inch of wood was used, while in the centre is the Equitable building which has 59 lifts and towers over the offices of the American Surety Co. The Bankers' Trust skyscraper can be distinguished by its pyramidal roof. On the opposite side of East river lies Brooklyn, formerly a separate city, where is the huge Navy Yard. Besides the three great suspension bridges Brooklyn is connected with New York by several tunnels. The name of the borough is derived from "breuckelen," meaning marsh land.



Ewing Galloway

CITY HALL AND GREAT NEWSPAPER OFFICES IN PARK ROW

The City Hall stands in City Hall Park, which is bounded on one side by Park Row. The hall was erected in 1803, in the Italian style, with a central portico, two projecting wings and a cupola clock tower. Park Row contains the offices of many of the city's principal newspapers. The building with the pointed clock tower houses the "Tribune," and that with a dome the offices of the "World."



Ewing Galloway

SECTION OF FIFTH AVENUE ALONGSIDE MADISON SQUARE

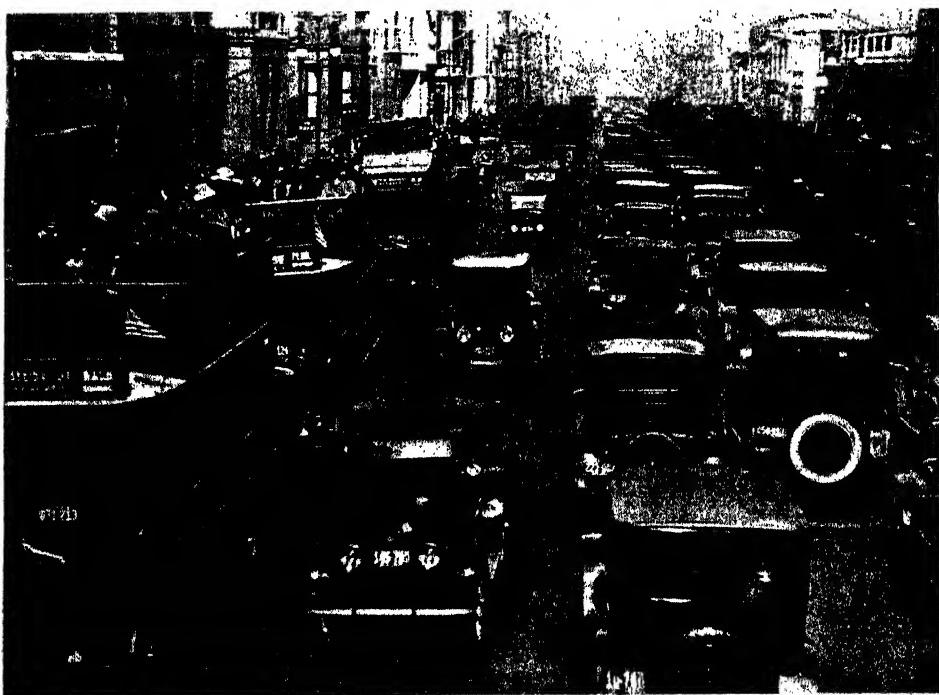
Flanked on the west side by Fifth Avenue, Madison Square, an attractive and a well laid-out public garden, is surrounded by several lofty modern buildings which indicate the irresistible northward advance of business on Manhattan island. The high tower in the background belongs to the theatre known as Madison Square Garden and is a copy of the Giralda Tower at Seville.



Underwood

A TRAFFIC JAM IN AMERICA'S FAMOUS CITY OF HUSTLE

New York has its traffic problem just as any other big city, and despite its great reputation for hustling, it takes longer to get to some places by car than on foot. This photograph was taken by 34th Street in Fifth Avenue, and shows the traffic control tower which is illuminated day and night exhibiting either a red or a green light to indicate to the traffic whether to stop or advance.



Ewing Galloway

TRAFFIC ON FIFTH AVENUE AS SEEN FROM A CONTROL TOWER

Fifth Avenue extends north from Washington Square to the Harlem river beyond Central Park, a distance of six miles. Along the avenue are some of the city's best hotels, shops and restaurants. To cross Fifth Avenue is a dangerous feat, and only to be attempted under the patronage of a policeman. If the attempt is made with the traffic in motion, it is a criminal offence, termed "jay-walking".



WHERE BROADWAY MEETS SIXTH AVENUE : "HERALD" BUILDING IN THE SQUARE

"Herald Square has taken its name from the "Herald" building, the unique two-storyed structure seen on the right. This building, in the early Renaissance style, with a profusely decorated exterior, was formerly the home of the "New York Herald," and is now occupied by a clothing concern. At all times of the day t near this important crossing are thronged with traffic, and the pavements with pedestrians, while within the colossal hives of offices a cosmopolitan people is work

Underwood



Ewing Galloway

BROADWAY AND SEVENTH AVENUE FROM THE "TIMES" BUILDING

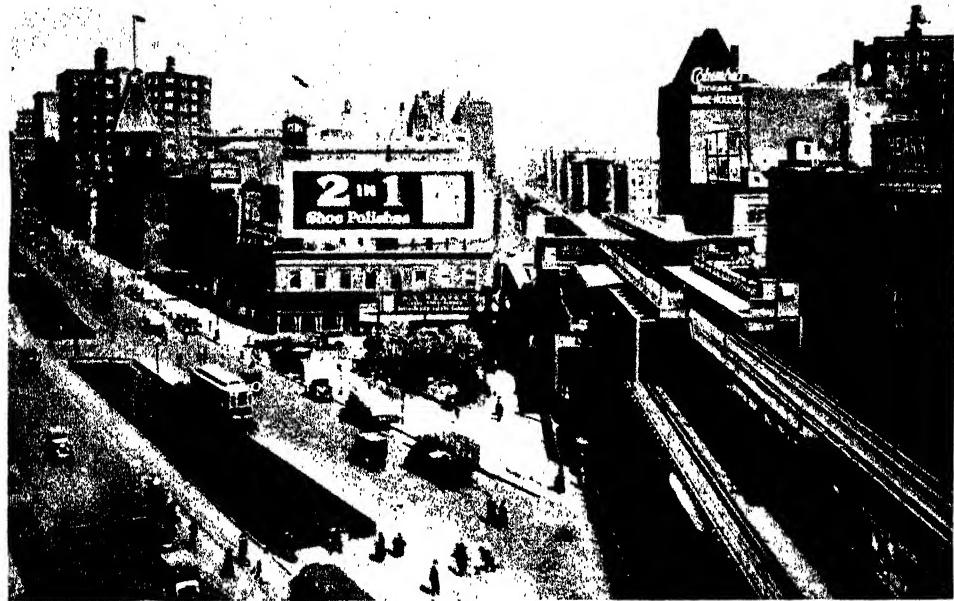
The "Times" building of twenty-six stories stands in Times Square, the Piccadilly Circus of New York and a hotel and theatre centre. Broadway runs to the left in the photograph, past the Hotel Astor at the corner of 45th Street, and Seventh Avenue continues to the right by Loew's State Theatre. Times Square, before the "Times" building was erected, was called Longacre Square.

by night Broadway leaps into its proper place! It is a commonplace to say that there is nothing in the world quite like the first impact upon your imagination of the lighted Broadway, but it is true, nevertheless.

Against that soft—almost southern—sky there is a world of figures jumping, leaping, turning head-over-heels with such an energy and élan that you can almost hear them crackle as they move. Straight across the sky, leaping right through space, there is a gentleman in a motor-car of sparkling silver waving his stout arms, mad with the energy of existence. Piercing the stars there are

three spires up whose heights little acrobats of fire are furiously climbing. A fountain of silver fire is tossing its waters into the air, and everywhere sentences are appearing and disappearing before your bewildered eyes, urging you to purchase without a moment's delay Wrigley's chewing gum, Somebody's cigars, or the magical B.V.D. underwear. And underneath all this the world of human beings is completely changed.

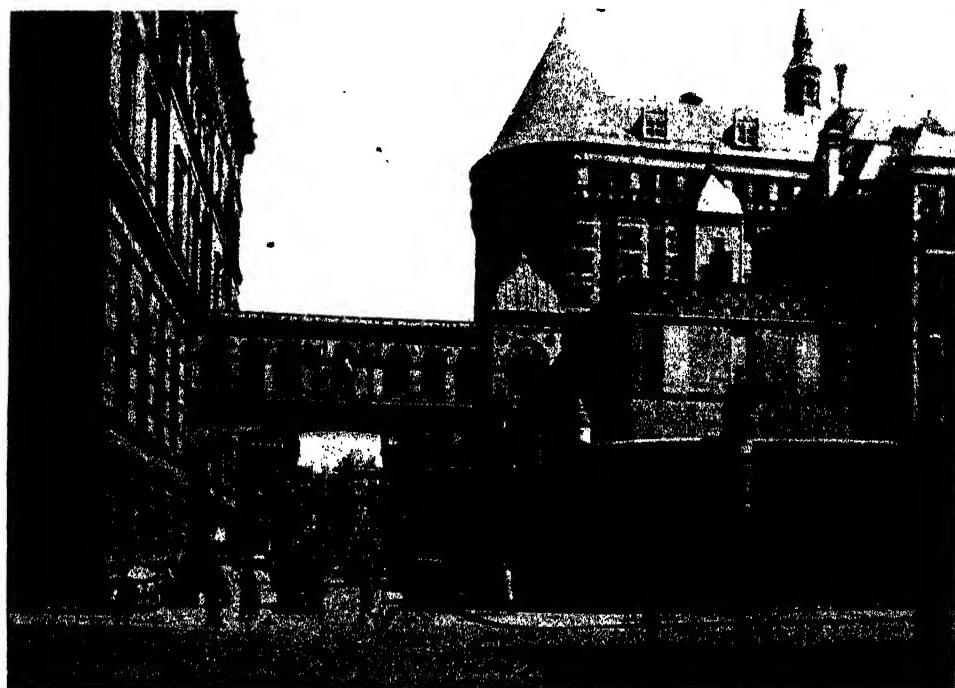
The drab and untidy and dejected men and women of the morning and afternoon have become romantic, coloured, audacious. The great crowd



Ewing Galloway

ELEVATED RAILWAY AT COLUMBUS AVENUE AND BROADWAY

In Manhattan nearly every avenue has its tramway, and there are four elevated railways running north and south. In the photograph an overhead line is seen along one side of Columbus Avenue, the continuation of Ninth Avenue. In New York the roar of these railways and the shrill, grinding screech of the wheels as they go round one of the sharp curves torture for ever the ear.



Ewing Galloway

BRIDGE BETWEEN THE TOMBS AND CRIMINAL COURTS IN ELM STREET

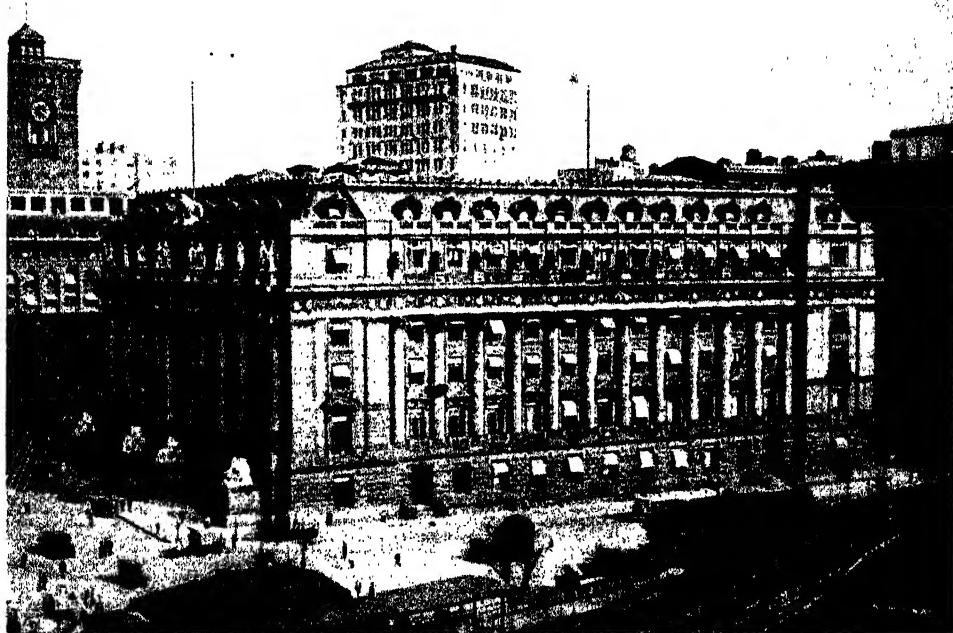
Between Elm and Centre streets stands the Tombs, the city prison of New York. The present building was erected in 1898-9 in place of a smaller granite structure. The flying bridge is called the Bridge of Sighs. A few blocks farther along is Canal Street, which was once the bed of a stream flowing across Manhattan island, and Grand Street, the shopping centre of the Bowery.



E. N. A.

FROM POTTER'S FIELD TO PUBLIC PARK: UNION SQUARE

Originally New York's great squares, such as Washington, Union and Madison, were the burial-places of the pauper population and lay beyond the old town limit, but as the town extended its area they were transformed into public squares with stately trees, flowers and pleasant lawns. Union Square lies between Fourth Avenue and Broadway; the statue in the foreground is of Abraham Lincoln



Ewing Galloway

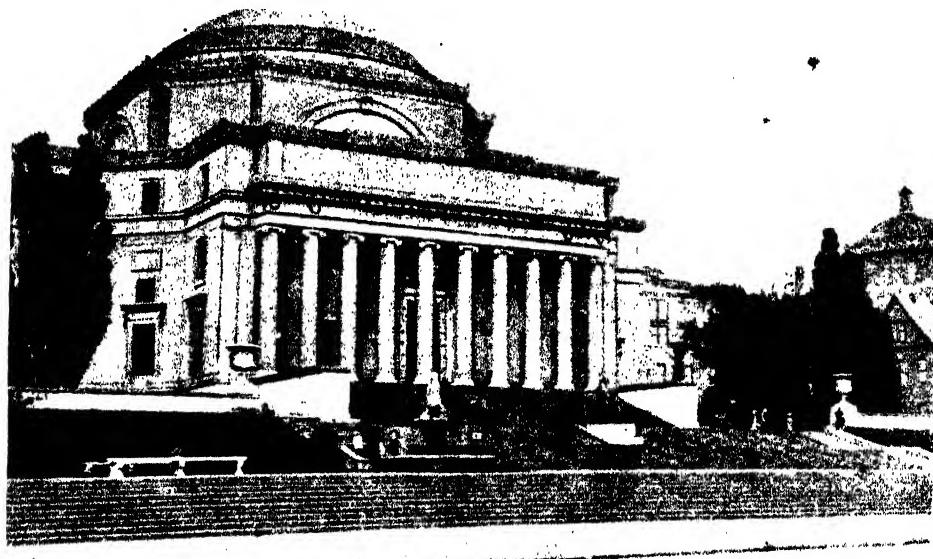
IMMENSE PILE OF NEW YORK'S SEVEN-STORYED CUSTOM HOUSE

The largest and most ornate customs house in the world stands fronting on Bowling Green, New York City. Occupying the historic site of Fort Amsterdam, which was erected in 1626, it is built of Maine granite and surrounded by a series of forty-four Corinthian columns; the façade has twelve marble statues, representing the great sea-powers, and four allegorical groups representing the continents

is one extended smile of happiness ; everywhere from lighted doorways men are shouting at you, urging you to buy seats for this or that super-entertainment, joking with you as you pass, brothers to all the world. I fancy that the spirit of Broadway at night resembles more closely the gay, careless, happy and cruel world of the medieval London and Paris and Florence than anything else there is to-day. Cruel is possibly too harsh an adjective to use, for although the underworld is there picking pockets, inviting strangers to deep

and water-tank and enormous chorus ; there is the Metropolitan Opera with its decorous stairways, its elegant and critical audience ; there are the theatres for the ordinary man who wants to forget his troubles and will laugh at almost anything you give him.

There is possibly John Barrymore in Shakespeare with a magnificent décor ; there is Bernard Shaw round the corner, and every conceivable Russian, Scandinavian, Italian masterpiece playing in small and superior theatres to large and superior audiences ; there are the



E.N.A.

MAGNIFICENT LIBRARY BUILDING OF COLUMBIA UNIVERSITY

Columbia University, founded in 1754, lies between Broadway and Tenth Avenue, and is the largest and most important educational institution in New York. The library is the finest of the university buildings. It is a Greek structure surmounted by a dome, and stands on a terrace approached by a broad flight of steps, in the centre of which is a fine figure symbolising the Alma Mater

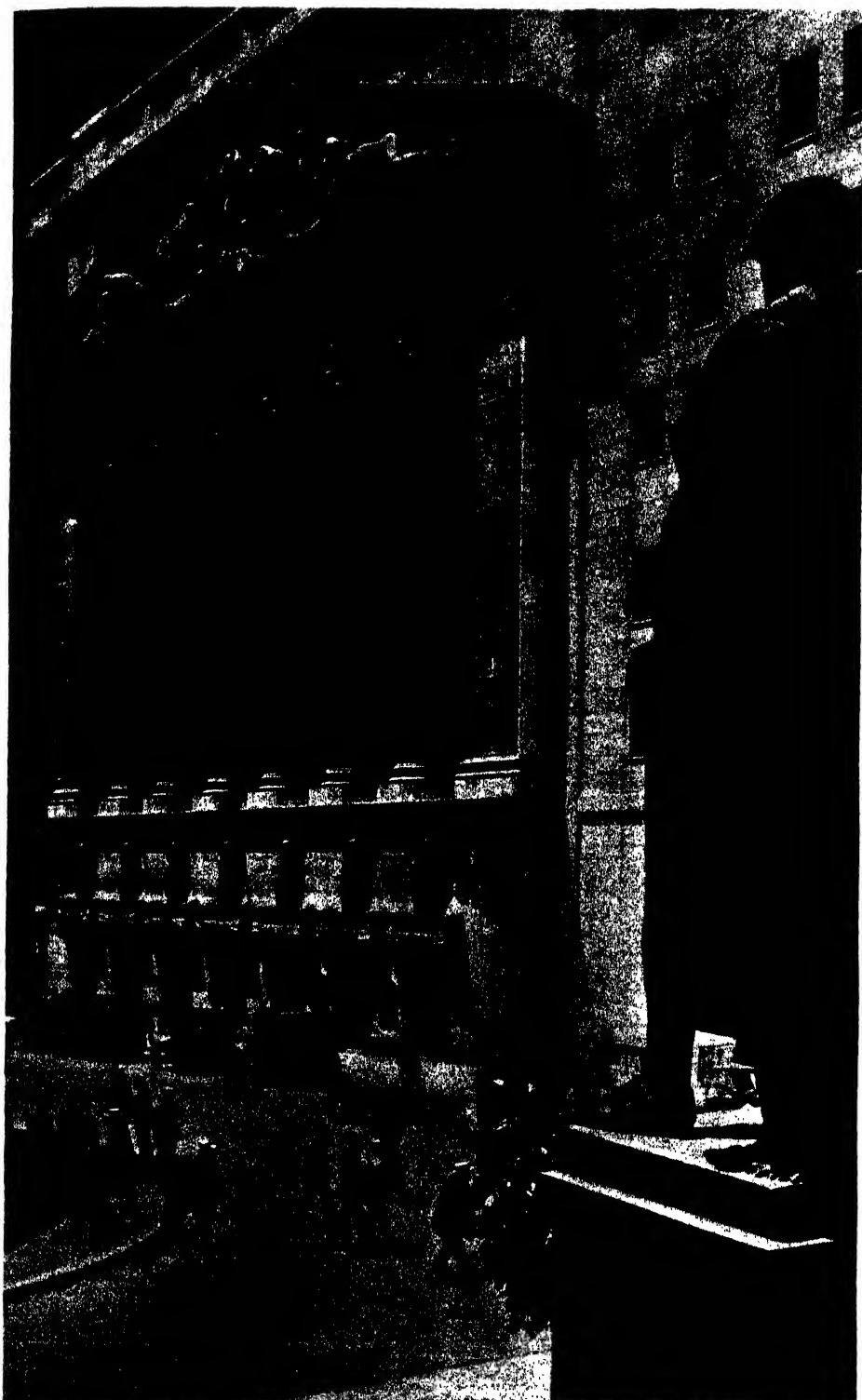
enterprises, nevertheless even here you feel that the humanity of it all saves it.

If you leave Broadway and turn into one of the side streets, or penetrate as far as Fifth Avenue or Madison, you are in a dead world, scarcely anyone is to be seen, and there is a deep silence all around you.

I suppose that there is no theatrical life anywhere to-day so comprehensive as this one of New York. Whatever your taste may be you are certain to find it represented somewhere. There is the huge Hippodrome with its circus

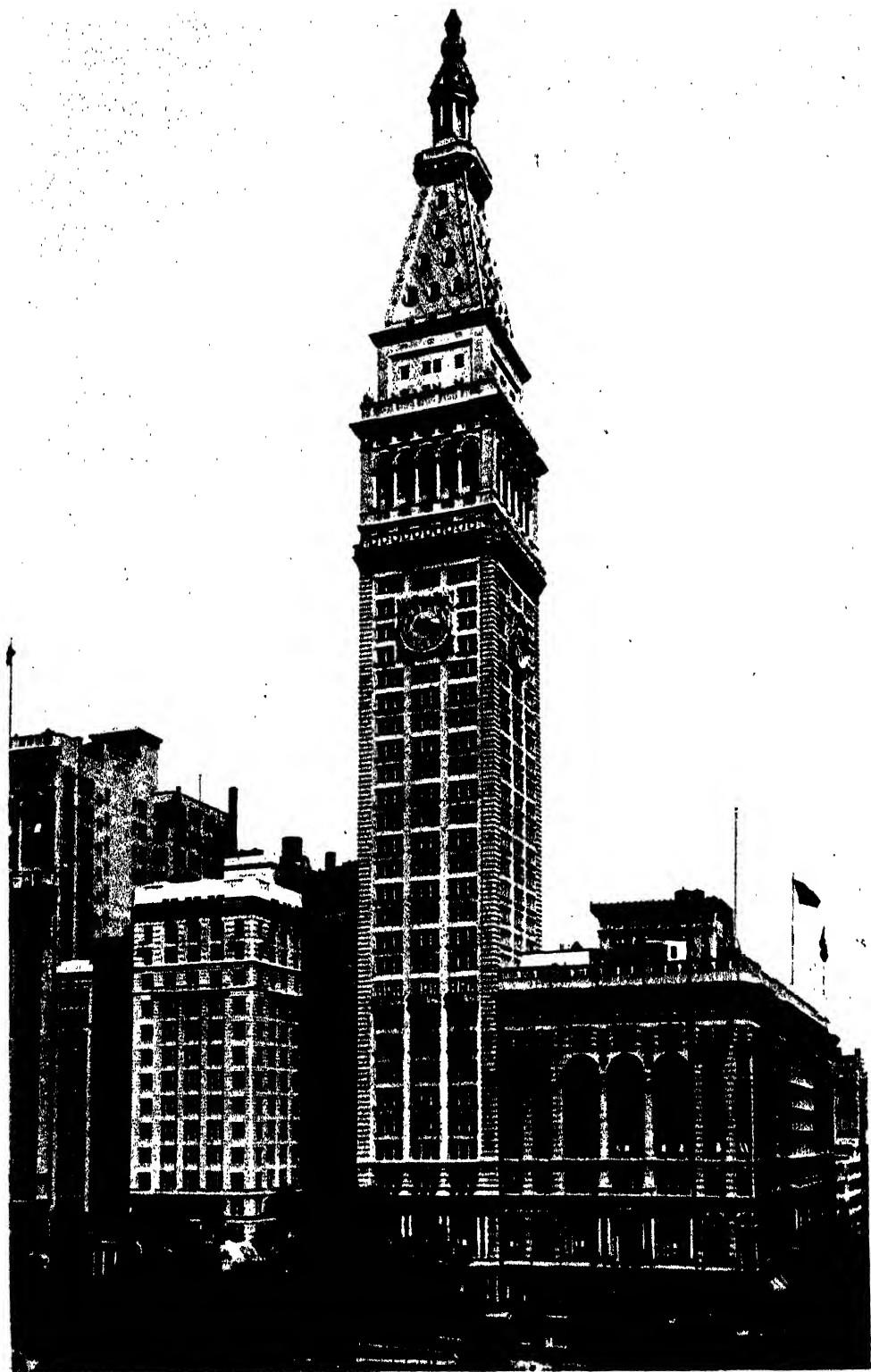
negro musical comedies, the Russians, Japanese, the South Sea Islanders, all serving that inexhaustible curiosity that is one of America's finest possessions.

It is indeed part of New York's character that she should offer the stranger, with as little difficulty as possible, all the treasures in her possession. Is there anything anywhere more wonderful of its kind than the Carnegie Library, into which anyone with an introduction can enter ? When Miss Green, its famous custodian, has looked you over, talked with you for five

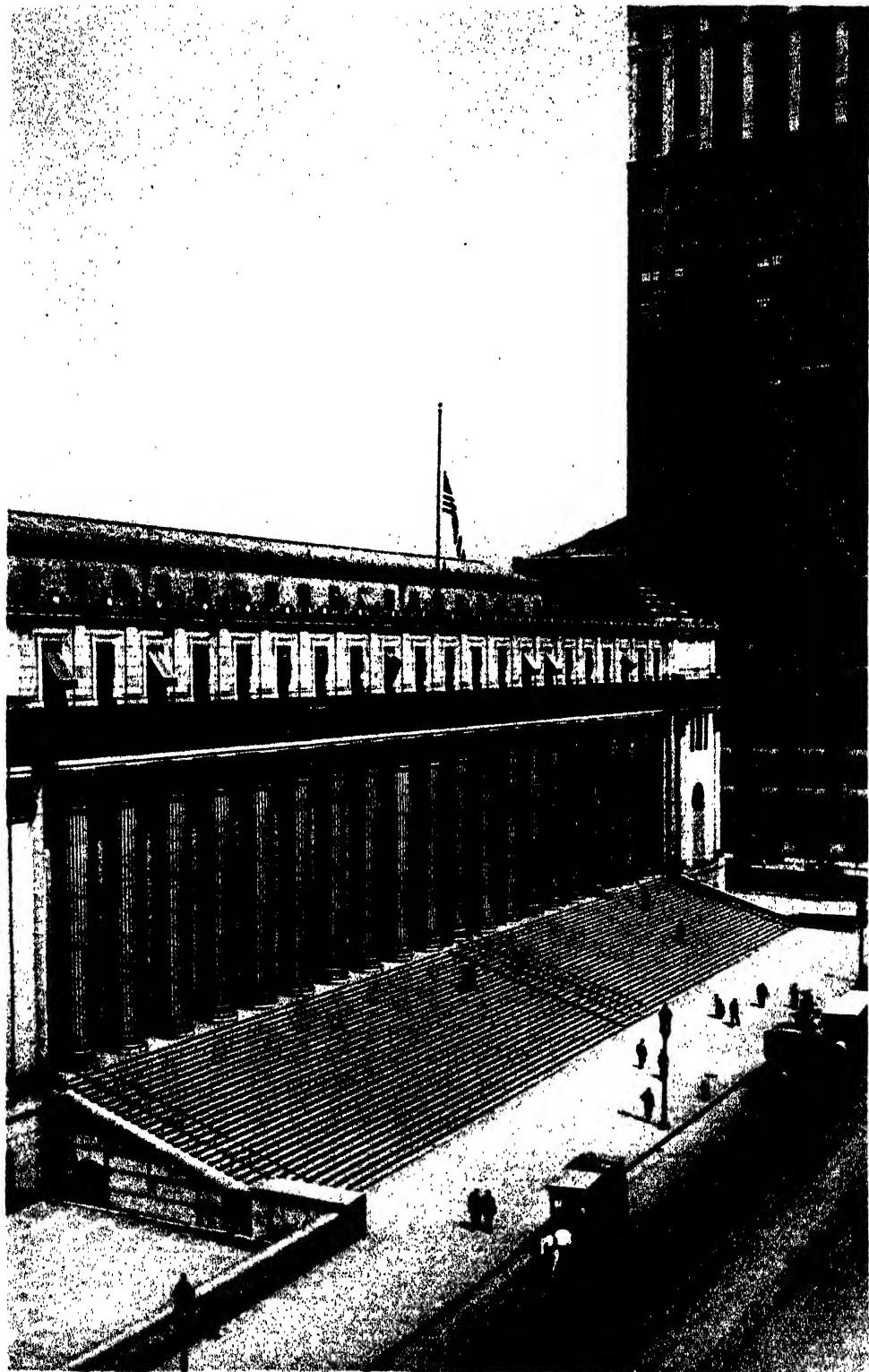


NEW YORK. From the Sub-treasury Washington watches the Stock Exchange and the flow of the financial tide in Wall Street

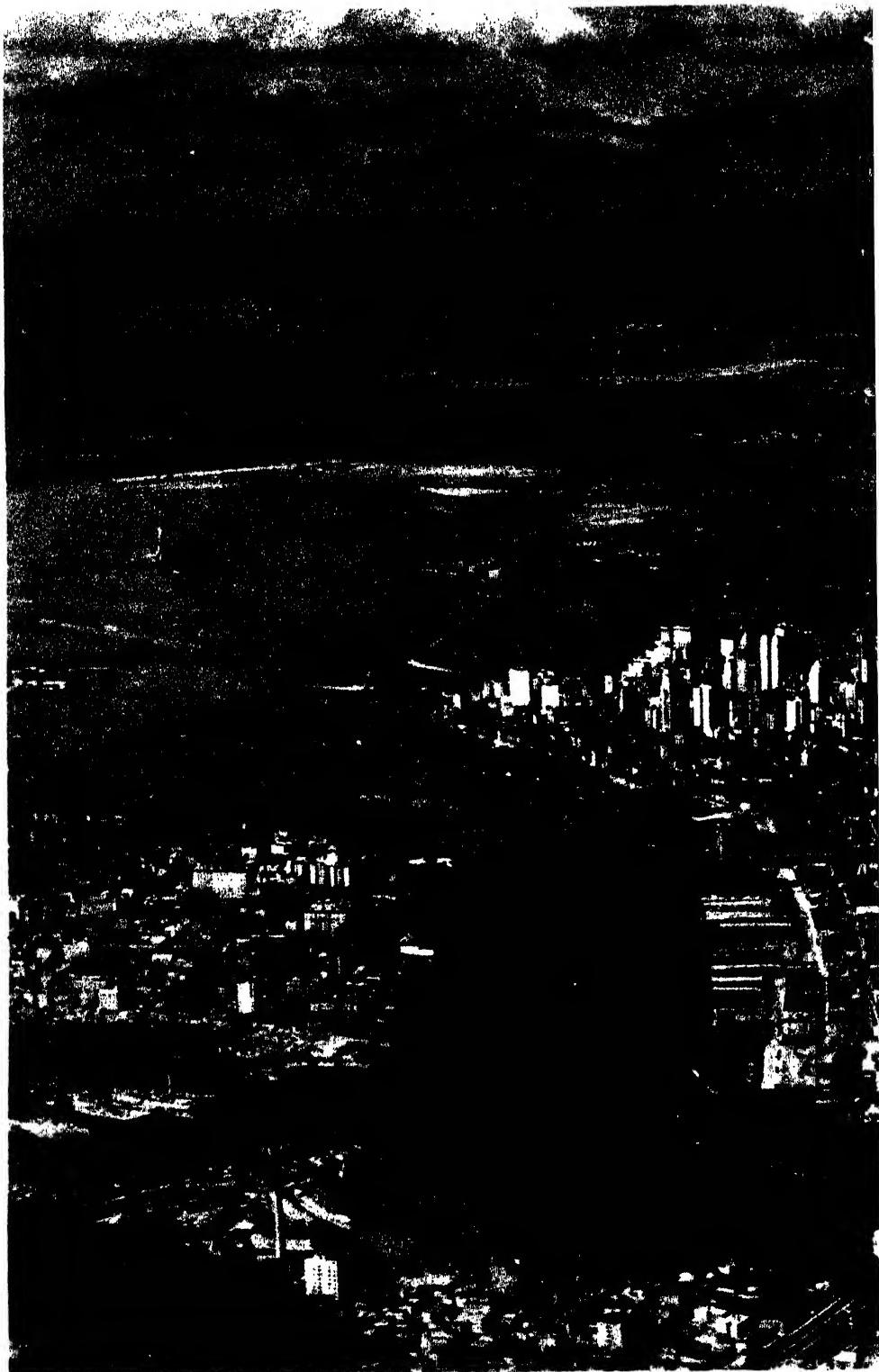
Photos, except in pages 2928 and 2929, Ewing Galloway



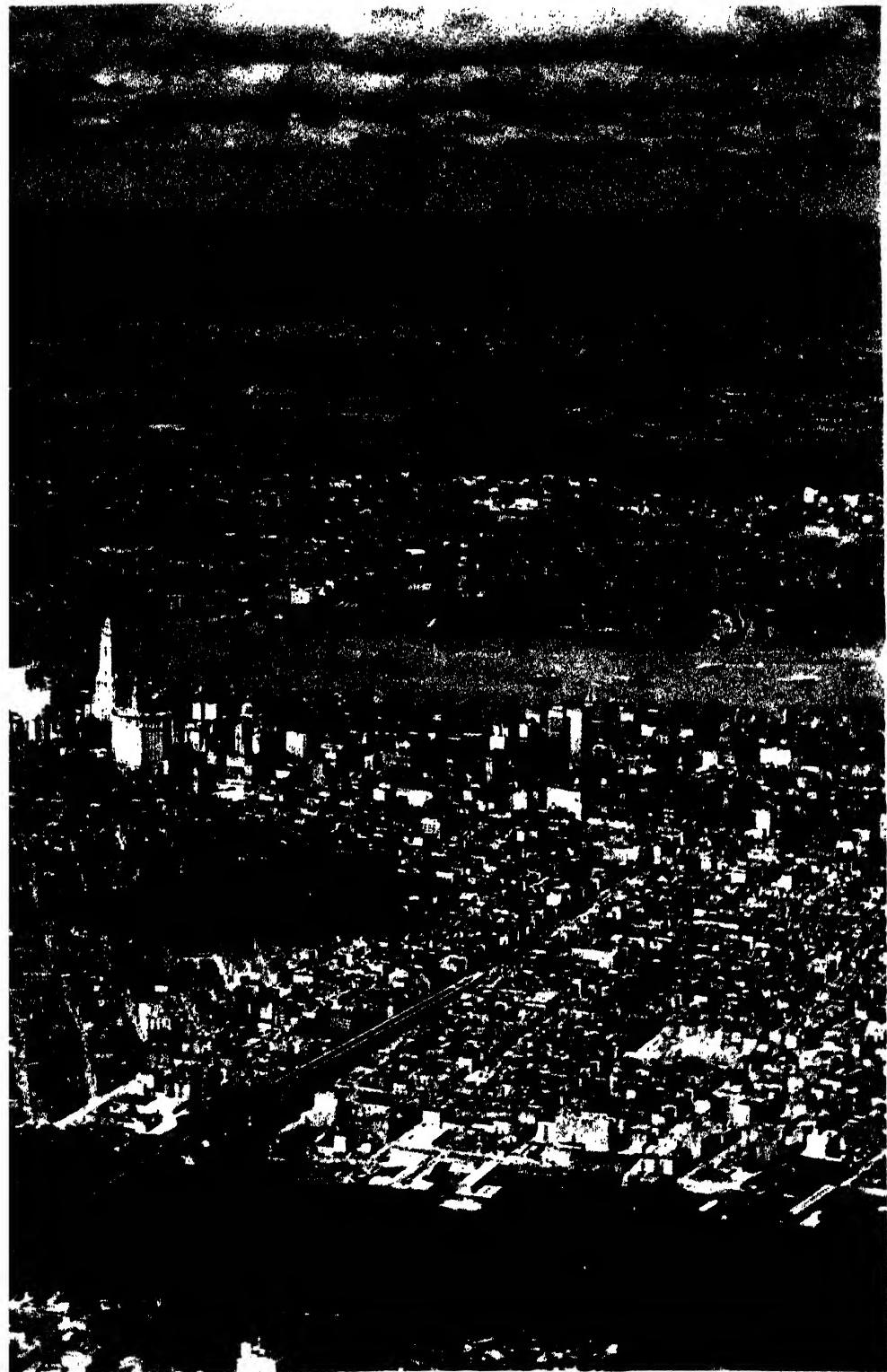
NEW YORK. This great forty-storey clock-tower in Madison Square, 693 feet high, dwarfs the huge buildings at its foot



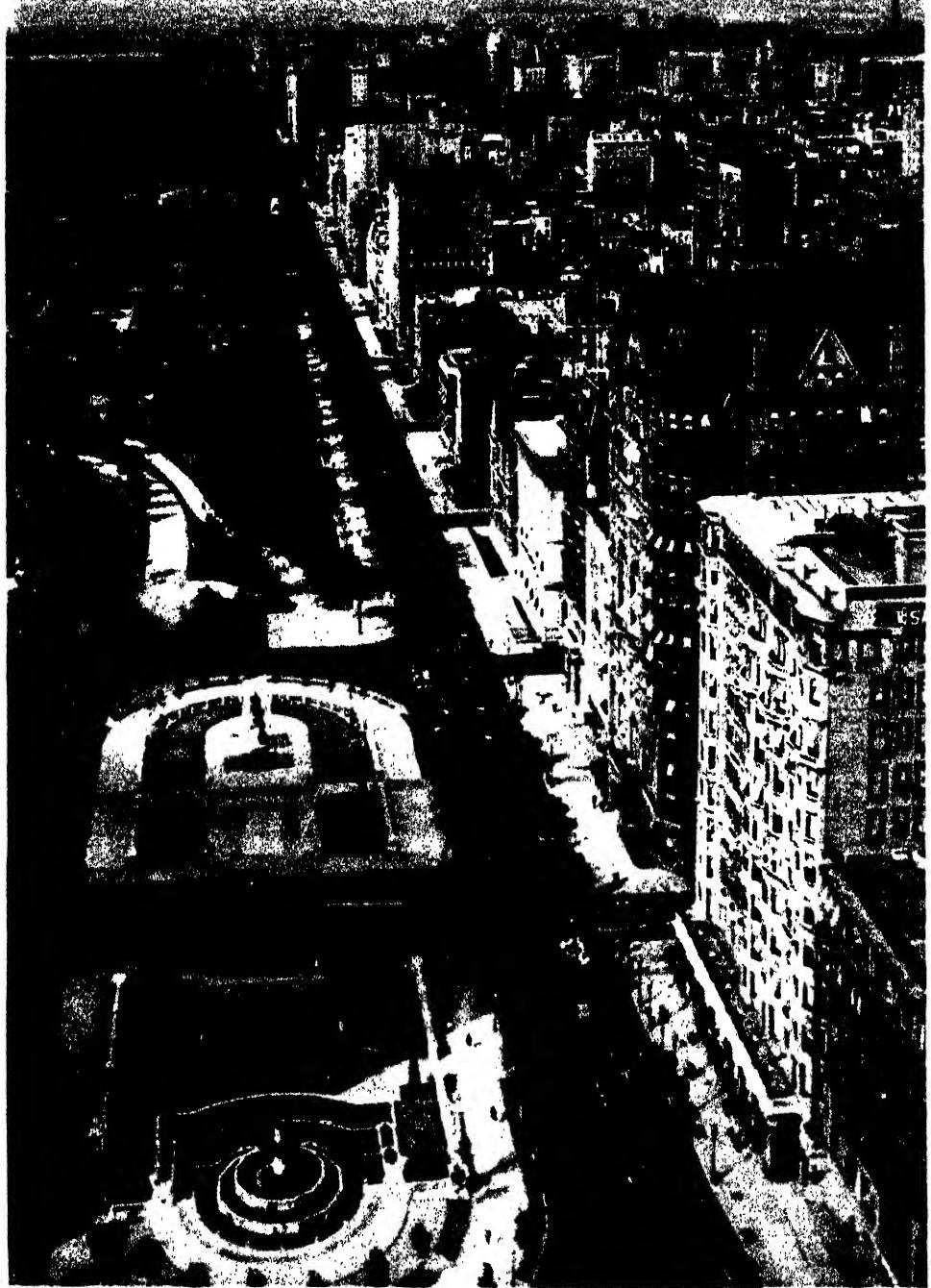
NEW YORK. On the south side of City Hall Park stands the Post Office building with its magnificent Corinthian colonnade



NEW YORK. *A sudden outcrop of gigantic buildings stands in a white blaze of sun at the narrow seaward end of the city-covered island of Manhattan.*



Jersey City lies in New Jersey, cloud-dappled across the Hudson, and in the foreground are Long Island and the suspension bridges over East River



NEW YORK. From the Plaza northwards, Fifth Avenue borders Central Park. Here are some of the city's finest private residences



NEW YORK. Before the statue of General Sherman in the Plaza in Fifth Avenue is the gigantic mass of the Heckscher Building

Behind the great wharves along the banks of the Hudson River the urge of business has driven building upwards until the skyscrapers have massed themselves into a range

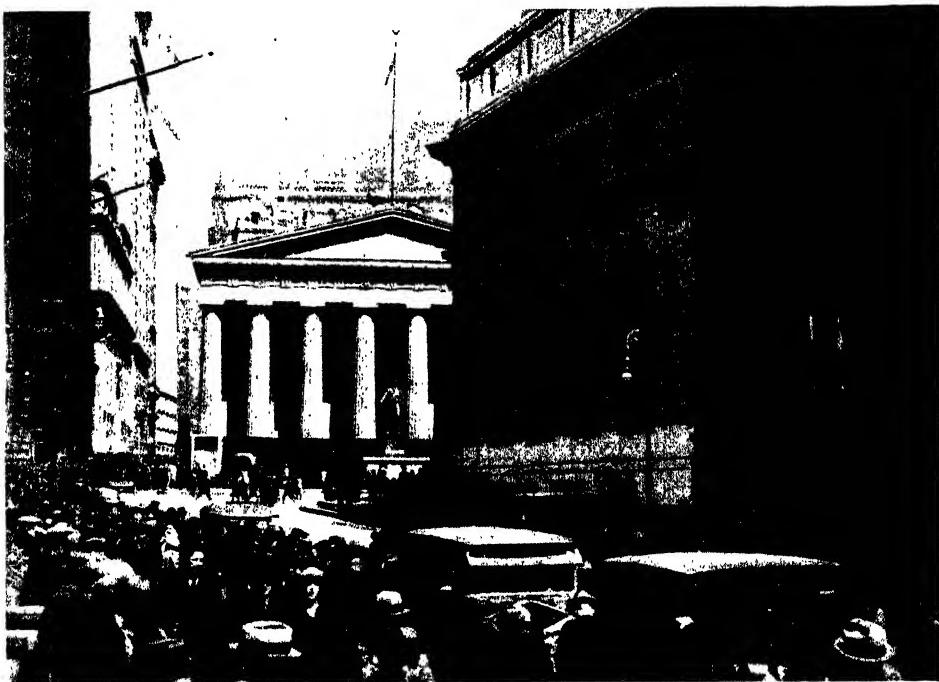
NEW YORK.



minutes, and decided that you are worthy of those treasures, you may be left quite alone for hours at a time with incredible marvels on every side of you.

There are so many things in the Carnegie Library that any lover of literature and human nature must gasp at the mere sight of. I will not attempt to record them here, but I remember one afternoon sitting in the room where the manuscripts are with a Dickens manuscript in one hand and a Thackeray manuscript in the other, knowing them

the lower town and East Side. Once you are below Lafayette Square you are no longer in any known world. Every conceivable nationality presses you in, and it is here, I suppose, that the real heart of New York beats and the real problem of America resides. But I am not attempting now to touch even faintly upon any problem. There is something terrifically simple from the point of view of one human being among others in this pressing closely together of so many different nationalities.



Underwood

FINANCIAL CENTRE OF THE BUSINESS METROPOLIS OF THE STATES

This photograph, taken from the Stock Exchange, looks up Broad Street towards the co'umed facade of the Sub Treasury in Wall Street. The financial activity of New York is centred in these streets, which are famous also for historical associations. Where the bronze Washington stands before the Treasury, the living Washington stood when taking the oath as the first president

in my grasp, myself quite alone with them, and then gazing about at the walls covered from floor to ceiling with precious things, and feeling like the Queen of Sheba that there was no heart left in me.

So orderly and perfect in their array are such places as this and the Metropolitan Museum and the Public Library that you feel a kind of shock of surprise in the tangled muddle and confusion of

Every country has its own separate colony, but in the streets you feel that there is something almost heartless in the contrasted and conflicting types. This, in spite of, or perhaps because of, its crowds, seemed always to me—myself only, of course, a superficial observer—to be the really lonely part of New York. It is not that anyone appears to be really unhappy, but rather that no one is at home.

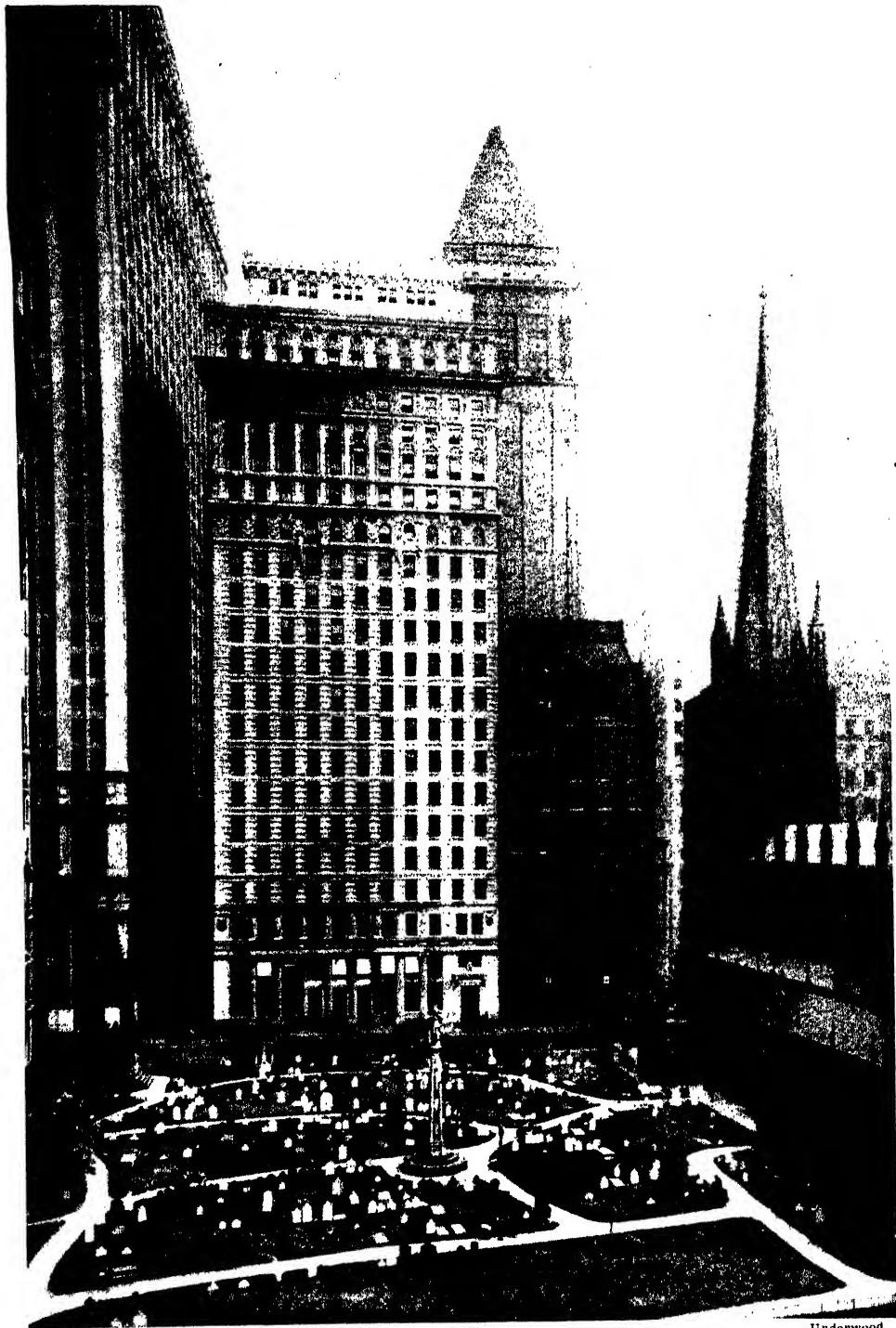
**MOUNTAINS AND MOLEHILLS OF STONE IN COLUMBUS CIRCLE**

Where the immense avenue that is Broadway touches the south-west corner of Central Park there is an open space called Columbus Circle. The great explorer, carved in marble, stands on a tall shaft in the centre and beneath his feet the traffic of Broadway and 59th Street meets. From on high the incessant vehicles seem like a flux of hurried ants and the ordinary buildings insignificant heaps of stone



F. J. Wnyard Wright

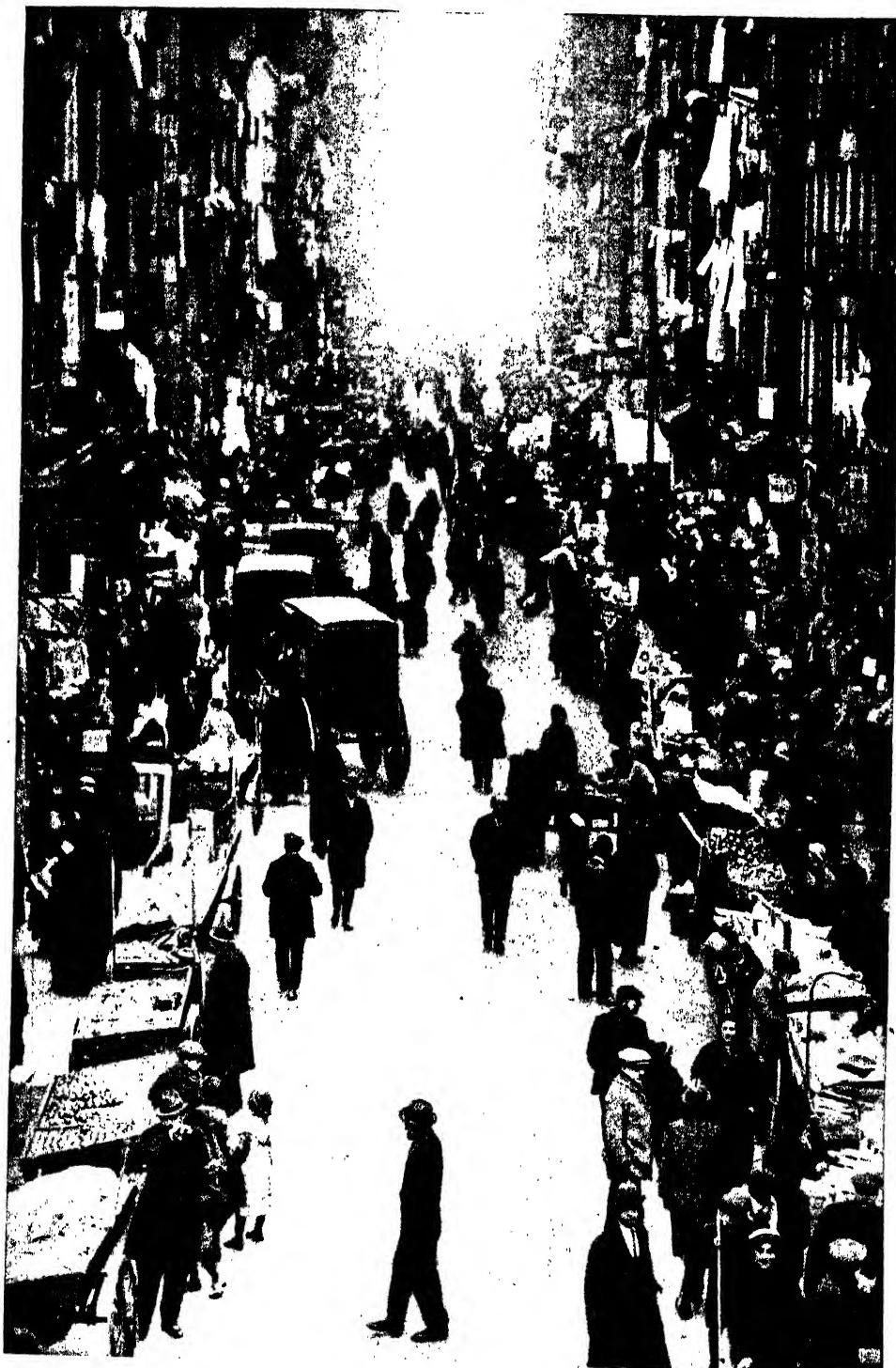
NATIONAL SHRINE ERECTED TO THE MEMORY OF A GREAT GENERAL
Commanding a beautiful view over the Hudson, above which it rises to a height of 280 feet, Grant's Tomb, on Riverside Drive, is an imposing national monument. Majestic, yet simple in its proportions, it immortalises the achievements of Grant, the general who led the Union armies to victory in the Civil War; his historic phrase, "Let us have peace," being inscribed above the Doric portico



Underwood.

TRINITY CHURCH HIDDEN BY GIGANTIC BLOCKS OF OFFICES

Trinity Church, a handsome Gothic edifice of brown stone, with a spire 285 feet high, stands on Broadway opposite Wall Street. The present building dates from 1839, but occupies the site of a church of 1696. On the left, across Broadway, is the Equitable building with about 2,300 offices, the business homes of nearly 15,000 people; next comes the twenty-storey office of the American Surety Company



STREET MARKET IN ORCHARD STREET, PART OF NEW YORK'S GHETTO
East Side, the district between the Bowery and the East river, is a tenement house area where streets have distinct national characteristics. The Jews are everywhere, while the Chinese monopolise Mott Street, the Italians Mulberry Street and the Russians Henry Street. The Bowery, once a farm and later a quarter of evil repute, is now a region of dull respectability

Ewing Galloway

That intermediate process of the alien who has not lived long enough in this strange country to become its proper citizen is at work here under your eye. The faces that you see, whether they be Chinese, Russian, Italian, German, Irish, seem to ask you whether they are ever destined to become accustomed to this grimy, overcrowded, ever-shifting world. It is not for the visiting stranger to answer them.

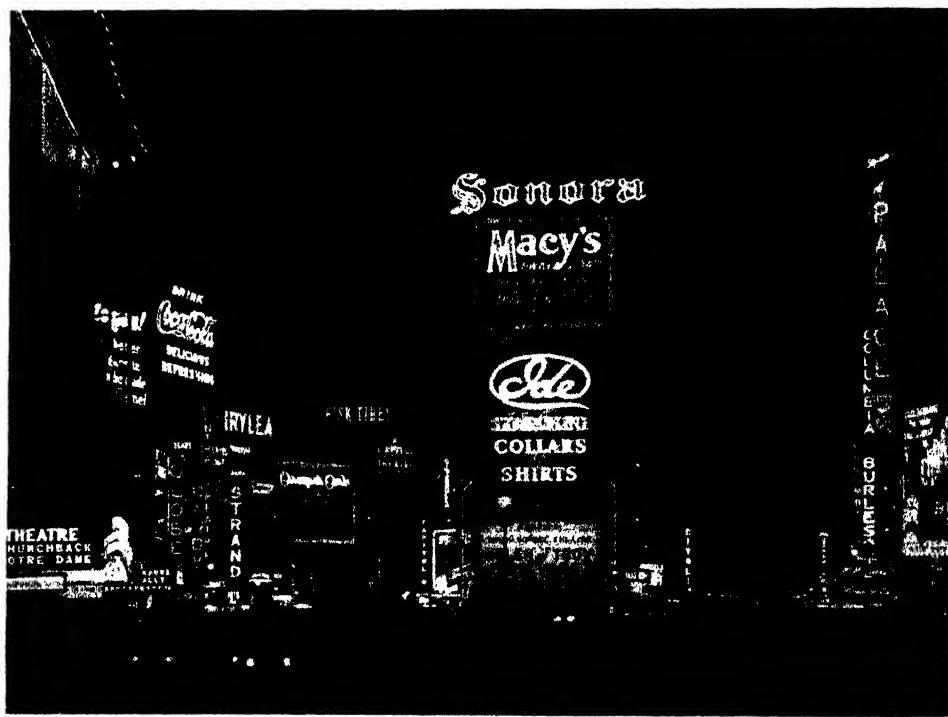
There is New York, built on that narrow long strip of soil, able to extend only skywards, and that most vigorously it is doing, generous, warm-hearted, but so busy and tumultuous, so driven upon by the outside world across the water, and by her own people from the distant stretches of the American plains, that she has no time to consider a solution of her tremendous problem.

I can hear the little cages tinkling in the house at the top of Fifth Avenue, can see the serried masses of motor-cars

waiting for the word of command, can catch the glitter of the leaping fountain in the night sky over Broadway, and, at the last, it is this pressing, bewildered, unfashioned multitude of people down there by the river who seem finally to be the true masters of the city.

They say that if at any given moment the inhabitants of all the buildings of New York were to pour out together upon the streets they would be piled one upon another four stages high, and, however this may be, you feel last of all that New York is stronger than her inhabitants.

She is the emblem of the future beyond any other city in the world, she will solve in her own way her difficulties; and finally, when you leave her and look back on those terraced buildings rising tier upon tier in the light, you know that as beauty was her first word not so many years ago, as history is reckoned, so it will surely be her last.



TREMENDOUS DISPLAY OF ELECTRIC SIGNS ON BROADWAY AT NIGHT
Round about 42nd Street along Broadway are gathered many of New York's best theatres. The dazzling display of electric signs of theatres, restaurants and advertisements have caused the thoroughfare to be called the "Great White Way." In this region is gathered all the luxury and amusement that money can buy, and it presents an unrivalled concentration of the glitter of life

Ewing Galloway

NEW ZEALAND

Sunny Islands of the Antipodes

by Boyd Cable

Author of "By Blow and Kiss"

NEW ZEALAND was proclaimed a crown colony in 1840, when the first organized immigrants landed and founded the city of Wellington. And how very "new" New Zealand is must be the first fact to strike the student of her history.

It is generally forgotten that the country was first administered as a dependency of New South Wales, Australia, and that the first administrator was the lieutenant-governor of New Zealand under Sir George Gipps, governor of New South Wales. But the same official after only a year became governor of New Zealand, and since the first days when it was clearly recognized that New Zealand ought to be a unit and stand on its own feet as such, the reasons for that decision have grown stronger with the years.

New Zealand is usually regarded as consisting of two islands—the North and the South—although more properly it contains a third small one, Stewart Island, in the extreme south, and now includes for all statistical and practical purposes the Chatham Islands, and within its geographical boundaries the outlying islands of Three Kings Islands, Auckland Islands, Campbell Island, Antipodes Islands, Bounty Islands and Snares Islands. The islands annexed are Kermadec, Cook, Niue (or Savage), Palmerston, Penrhyn (or Tongareva), Manahiki, Rakaanga, Pukapuka (or Danger) and Suwarrow.

A Brighter Britain

By mandate of the League of Nations New Zealand also administers the former German possession of Western Samoa, and jointly with the Imperial and Australian governments, the island of

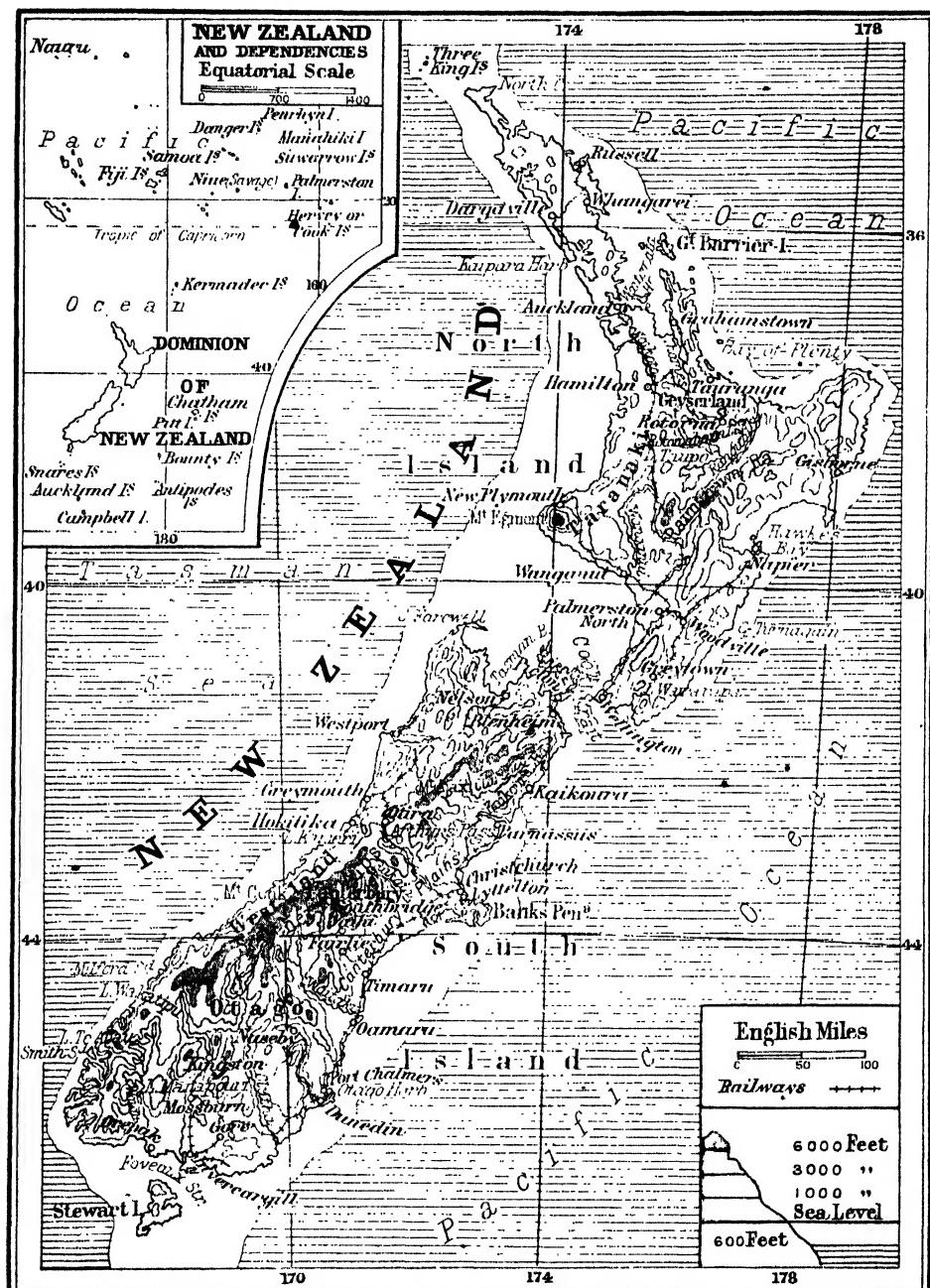
Nauru. The total population (including the Chatham Islands) numbers 1,219,000 whites and 52,500 Maoris.

To describe in a sentence the outstanding characteristics of this New Zealand, it would be hard to better the phrase of the traveller who called it "a brighter Britain." There are many of the natural and physical features which strongly resemble those of Great Britain, and the people are if anything more intensely and patriotically British than the people of Britain themselves.

Cooperation, Not Competition

But it is altogether a brighter and sunnier Britain, not only in its equable climate and freedom from any extremes of heat and cold, but in its beautiful sunless cities, in its lack of any blots of "Black Country," in its greater opportunities offered to every citizen, in its health statistics—its death rate of 9.51 per 1,000 of population is the lowest in the world—in the happy condition which is the keynote to the pleasure of life there: "cooperation, not competition" and "equal opportunity for all."

The climate offers the first condition of a healthy and happy out-of-door life. From north to south the dominion extends between $34^{\circ} 25'$ and $47^{\circ} 14'$ S. (corresponding in northern latitudes to the position of Spain and France); but although the north is warmer than the south, there are no extremes of heat in the one nor of cold in the other, or as New Zealanders say: "A man can always work with his coat on in summer and off in winter." Other conditions than those of latitude vary the climate of different parts. The northern areas are under the influence of ex-tropical



disturbances and the southern of the westerly winds and antarctic "lows," while the mountain ranges play their part in climatic conditions.

Throughout the whole country one condition appears to play off against the

other to avoid the extremes of temperature or rainfall. North of Auckland, for instance, where the climate is almost subtropical, the heat of summer is tempered by cool breezes, while in winter the winds are from the warm

north and west. Cumulus cloud gatherings are frequent in the afternoons, again tempering down the sun heat. The mean temperature of the year at Auckland is 59.2° F.; January, the hottest month, ranging from 73.7° to 58.9° , and July, the coldest, from 57.6° to 46° . There are usually about 1,900 hours of sunshine in a year.

Wellington, centrally situated, has a year's mean of 48.65° F., the January maximum and minimum being respectively 70° and 53.3° , and July 53.7° and 40.9° . The sunshine hours are 2,030 in a year. Dunedin, in the most southern province of Otago, has a January mean

of 66.4° max. to 49.5° min., and in July from 47.5° to 36.9° .

It may be interesting to compare the London temperatures of 74.1° max. and 54.5° min. in the hottest month, 43.5° to 34° in the coldest, and a mean over the year of 46° . At most of the recording points in the dominion the sunshine hours registered average about five to six a day all the year round, say 50 per cent. of the possible, while Britain's is about 27 per cent.

Over most of the dominion the rain falls in heavy showers, and rarely except on the west of the south coast in protracted drizzles. Even in this wet



Underwood

MIGHTY MOUNTAINS RISING FROM THE WATERS OF MILFORD SOUND
Milford Sound is the most northern of the great fjords on the south-western coast of South Island. Mitre Peak and Tutoko, their flanks covered by evergreen bush, rise sheer from the water, and beyond is Mount Pembroke with its great glacier. The Sound forms part of a national reserve, including also the neighbouring fjords, and covering more than two million acres of wonderful scenery

New Zealand Government

SPACIOUS HARBOUR AT LYTTELTON, ONE OF THE CHIEF PORTS OF SOUTH ISLAND

Lyttelton is situated on the north-west side of the Banks Peninsula on the east coast of South Island. It is the port of Christchurch and the district of Canterbury. Large breakwaters protect the fine inner harbour while the natural outer harbour is ten miles long and two in breadth. The town is encircled by steep hills through which a tunnel has been driven to give access to Christchurch, seven miles distant. Among the exports are grain and meat from the rich agricultural district of Canterbury. The first portion of the railway between Christchurch and Lyttelton was laid in 1863, and was also the first railway in New Zealand.





GAFFING A TROUT ON THE WAIAU RIVER, ONE OF THE EAST COAST STREAMS OF SOUTH ISLAND

No game fish are indigenous to New Zealand's rivers, and wholesale attempts at acclimatising salmon and trout have been made. The results with the former have been most disappointing, but several species of trout, especially the brown trout, breed well. The estuaries of South Island yield good sport, and the fish run up to eight lb. or more, and fight well. The minnow is the best bait for the larger fish, but there are ample opportunities for the fly fisher. In lakes like Wakatipu there are trout of 25 lb. fish to break an angler's heart and tackle, but they are above the temptation of any lure. The net is the only way.

Westland (116 inches of rain a year) the sunshine hours are 1,871. Auckland has an annual rainfall of 43.88 inches, Wellington 48.65, Dunedin 50.1.

Land of the Golden Mean

Droughts are unknown in New Zealand, as are also excessive rainfalls. In Auckland the temperature is warm and mild with occasional slight night frosts. In Wellington the weather is changeable, pleasantly warm in summer, cool with occasional cold days in winter. Canterbury has night frosts for more than half the year, some in winter being severe enough to damage tender vegetation. Otago is diversified in temperature as in physical features, inland being more notably hot in summer and cold in winter. On the whole the climate is not unlike England's, although a good deal warmer throughout, with more heavy and night showers and fewer protracted periods of wet.

In physical features, too, as well as in weather, there are points of resemblance to Great Britain, if we remember that New Zealand is on the opposite side of the Equator and that the north and south are therefore reversed climatically. But in detail New Zealand has the advantage in almost every point.

Earthquakes of the Gentler Sort

She is magnificently provided with deep water harbours where her largest liners lie close up to the shore and in some cases to the heart of the cities; her mountains are incomparably more magnificent than the best that even Scotland can show, and indeed the range of the Southern Alps, which runs like a backbone down the South Island, can only be compared to Switzerland for spectacular grandeur.

The rugged coast-line of the Westland is a maze of fjords, deep water sea-arms winding between cliffs towering to the clouds, as fine as any to be found in Norway; there are many scenes as peacefully picturesque as any the Thames can show; and in the thermal regions round Rotorua there are great

tracts of weird hobgoblin scenery, of smoking and steaming hills and vales, boiling springs and spouting geysers, unrivalled in the whole world.

The volcanic nature of the thermal area and the frequency of earthquake shocks have given rise to some rather exaggerated ideas of the "quaky" character of the dominion. Actually out of some 1,800 shocks scientifically recorded only one or two have been of greater intensity than to register between III. and IV. on the Rossi-Forel scale—that is to say, to do more than stir the pictures on a wall, make the doors and windows creak a little or stop an occasional clock.

Evidences of volcanic nature are found not only in the North Island where there are still some mildly active volcanoes, but in rocks of volcanic origin scattered through the South Island and in the whole geological formation.

Geologic Rise and Fall

The oldest fossiliferous rocks found in New Zealand are the Ordovician argillites, and the presence of Silurian, Devonian and carboniferous fossils shows that these systems are represented in the palaeozoic sequence. Although this information would probably bore the average man, it might be of the most practical importance to him to know in less scientific language that they include marble, sandstone, shale, greywacke, quartzite, schist and gneiss.

Millions upon millions of years ago, while these layers of rock were being deposited, New Zealand is supposed to have been the foreshore of an enormous continent. The uneven cooling of the earth crusts caused great earth movements and far-reaching changes which included the folding and breaking of the existing strata and the lifting of New Zealand, probably after the deposits of the Trias-Jura sediments, which are now the Southern Alps.

The land rose considerably in the older pliocene period, and was then probably joined to the Chatham Islands from which it is now separated by a



E.N.A.

SOUTH ISLAND: TREE FERNS IN THE BUSH NEAR SMITH SOUND

Bush scenery in New Zealand is always beautiful. Delicate ferns and mosses form a fair carpet in many dells, and the bright green stems of the Nikau palms shine like polished marble and are free from strangling parasites. The lovely tree-ferns form graceful canopies, often 30 to 40 feet above the ground, and on the fronds shades of brown, green, gold and silver are softly blended.



S. Basley

LOOKING OVER AUCKLAND AND UP QUEEN STREET, THE CITY'S PRINCIPAL THOROUGHFARE

Auckland, the largest city of the North Island and the capital of the province of Auckland, is situated on the south side of the Waitemata harbour. The isthmus on which it stands is of volcanic origin. Queen Street leads inland from the main dock, and contains the majority of the best buildings. On the right is the town-hall, surrounded by a clock tower, standing at the corner of Grey Street. Queen Street and the other main roads are served by electric tramways. The harbour, one of the finest in New Zealand, is accessible to the largest vessels at low tide, and the Calliope dock is the biggest in Australasia.



WELLINGTON, THE CAPITAL OF NEW ZEALAND, BY THE SHORE OF PORT NICHOLSON

New Zealand Government
Wellington stands on the western shore of Port Nicholson, an inlet of Cook's Strait, the site affording a splendid harbour. The town has suffered from the impossibility of extension owing to the girdle of hills, on the slopes of which the buildings and houses of the town rise in terraces. The town was founded in 1840, being the first settlement of the New Zealand colonists, and it became the capital on the transference of the seat of government from Auckland in 1865. Besides containing the Houses of Parliament and Government House, Wellington possesses in Victoria University one of the chief educational institutions in New Zealand.

trough from 1,000 to 2,000 fathoms deep. There was subsidence in a later period and elevation again in the pleistocene period, with other changes of level since. During these periods of subsidence cretaceous and tertiary strata were deposited, and in these are found the workable coal seams of the dominion which support thriving communities of miners and give New Zealand the valuable possession of the famous Westport coal, which is said to be one of the best steam coals in the world.

Giant of the Southern Alps

The hilly and mountainous nature of large parts of the country have great effect on the rainfall, and therefore on agriculture, and also on manufacturing and transport facilities. About one-tenth of the North Island is mountainous, but few of the peaks have a greater altitude than 6,000 feet. The rocky backbone of the Southern Alps, however, has many of 8,000 to 10,000 feet, six over 10,000, and one, the mighty Aorangi, "The Sky Piercer" of the Maori more prosaically re-named Mount Cook, of 12,349 feet.

Except for occasional flat expanses here and there, the whole country is rolling and undulating and heavily timbered. Much of the timber is being cleared off to make grass-land for sheep and cattle pasturage, the usual process of clearing being by "burning off." In a tract of land to be cleared, the big trees are "ring-barked," a complete circle being cut through the outer and inner bark so that the sap ceases to rise and the tree dies. Smaller bush is cut down, allowed to dry and set on fire, and grass then sown among the ashes.

Pioneers of the Bush

It is in the clearing of this wooded or "unimproved" land that the greatest opportunity of the settler lies. "Improved" land changes hands at amazingly high prices—in some dairying districts at as much as £100 an acre—but the unimproved land of the backblocks can be bought at a very low price, while

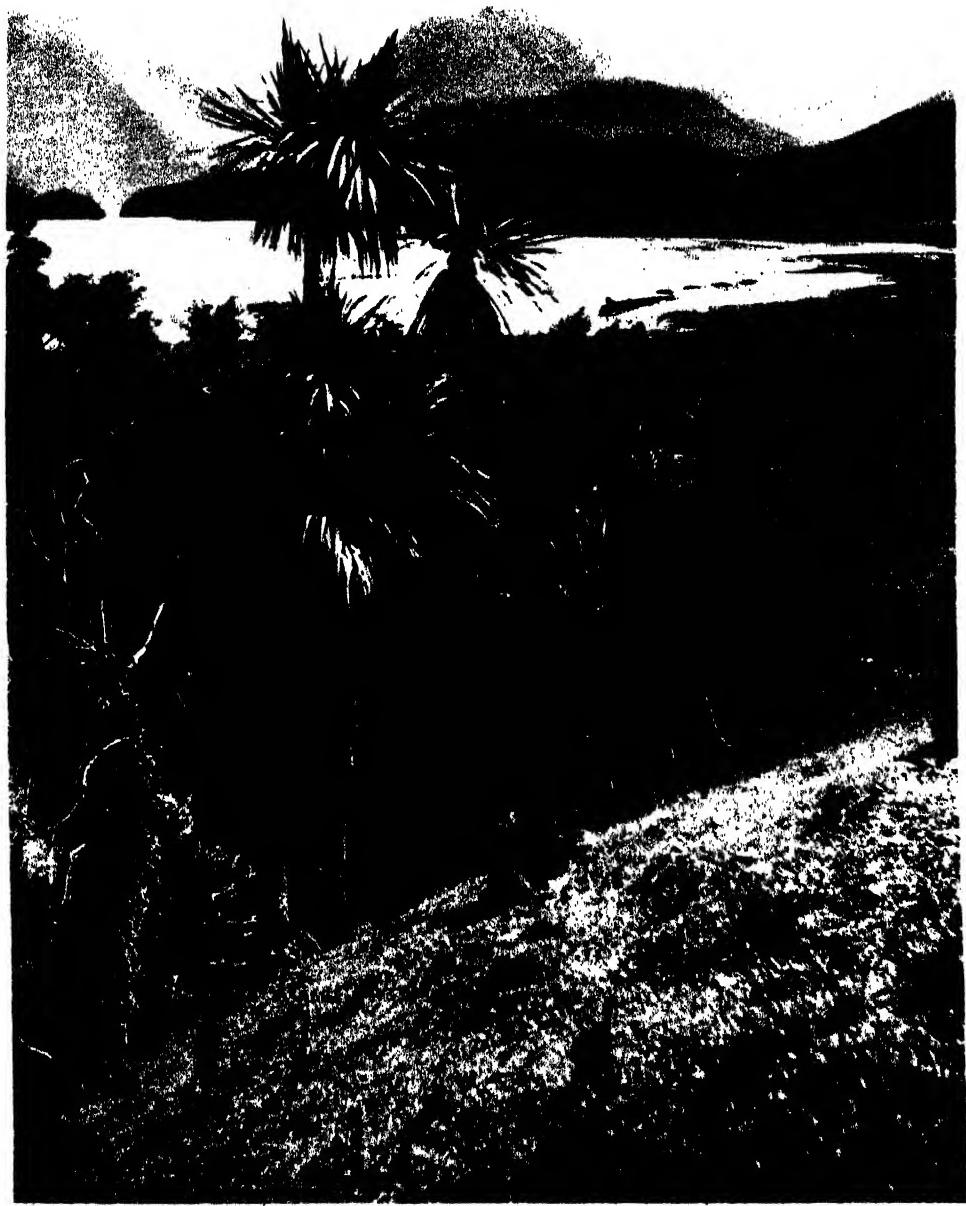
every acre cleared adds to the value. New Zealand is full of men who, with little or no capital, took up unimproved land, and are now comfortably off and assured of a competence for life.

Although the country is strongly "Labour" it is not Socialist to the extent of wishing the state to indulge in competition with private enterprise except on certain well-defined lines where it is considered the public is best served by national control. The railways, the post, telegraph and telephone services are state owned. The state, too, has a controlling interest in the Bank of New Zealand and a national provident fund, and carries out life, accident and fire insurance. It has also reserved the development of water-power as a monopoly.

Hydro-Electric Development

This hydro-electric enterprise promises to develop to a tremendous extent, and New Zealand will probably lead the world in it before long. Already £20,000,000 have been allocated to the establishment and extension of the work. With her high ranges of hills, her lakes and gorges, and the rapid fall from high to sea levels, the dominion realizes that conditions are ideal for hydro-electric development, and such schemes as have been tried in a comparatively small way have had most encouraging results. Manufacturing and transport facilities will receive an enormous impetus from the development of this water-power.

Clothing and imported goods are rather dearer than in England, rents comparatively high; but, on the other hand, the cost of food is very low. The average retail prices per lb. in the four main centres were as follows in June, 1923: bacon, 1s.; beef, 5½d.; mutton 8d.; bread, 3d.; butter, 1s. 5d. cheese, 1s. 0½d.; rice, 3½d.; sugar, 4d. eggs were 2s. 5d. a dozen, flour 5s. 2d. per 25 lb., milk 6d. a quart, potatoes 1s. 8½d. per 14 lb. Butter, cheese, milk and eggs would be considerably cheaper in country towns and districts.



John Bushby

NEW ZEALAND. *Slim cabbage palms with dark green heads flirt
in every breeze from the mountains that hedge the Dart Valley*

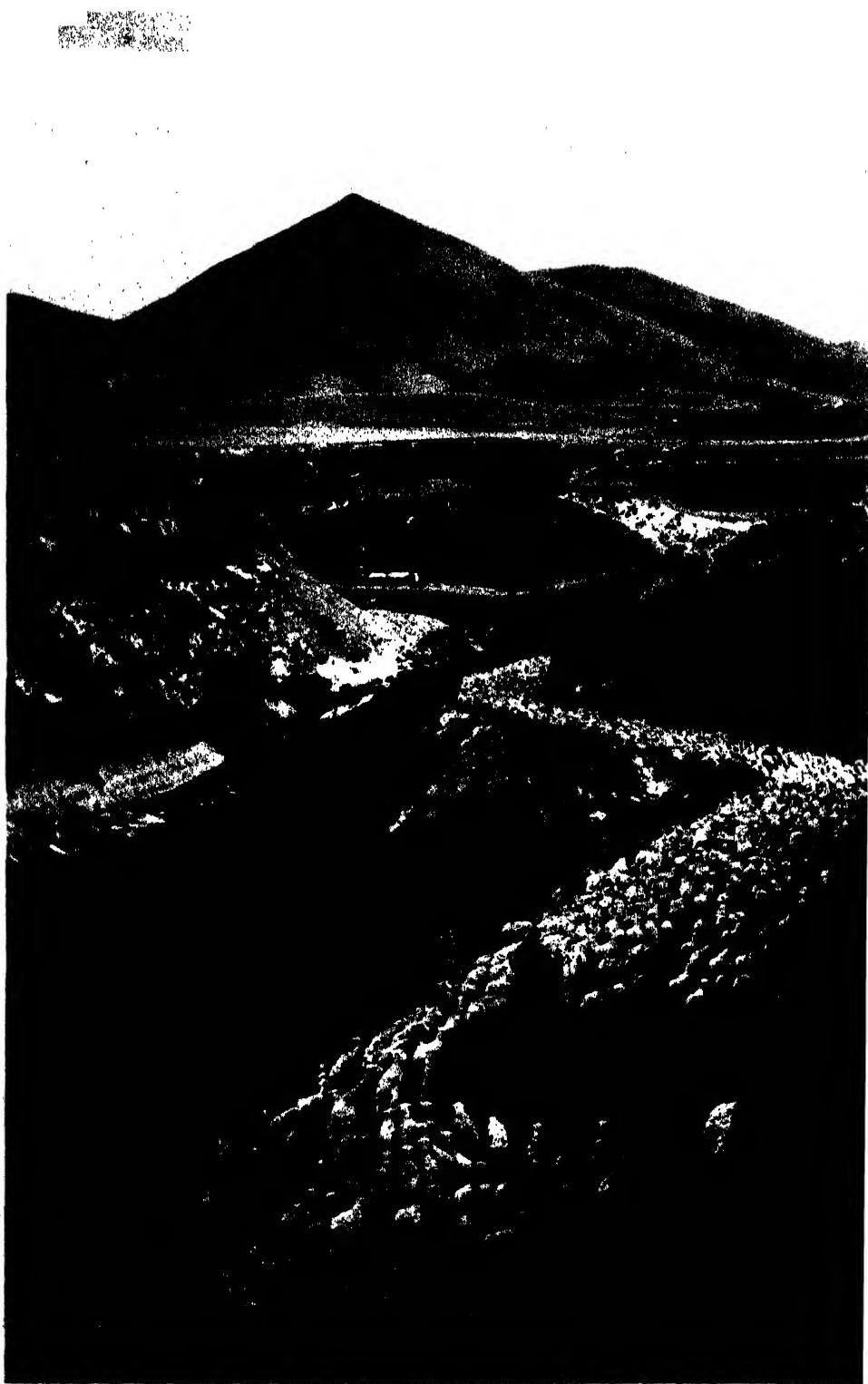
NEW ZEALAND. Smooth green turf and tree-lined avenues make Rotorua a beautiful town, while the geysers and hot-springs of the surrounding district give it first place among the local sanatoria



New Zealand Government

NEW ZEALAND. Picton, a tiny port tucked away at the head of landlocked Queen Charlotte Sound, is connected by a railway that passes over a great trestle bridge to Blenheim, eighteen miles away.





W. Reid

NEW ZEALAND. *An ordered army of sheep winds slowly along a road upon the side of the bare hills in the Wairarapa district*



W. Reid

NEW ZEALAND. As the great flocks of sheep are herded down the track, a light cloud of floating dust follows their course



New Zealand Government

Standing on a terrace, the Houses of Parliament with their white colonnade are prominent against a background of hills at Wellington



John Bushby

NEW ZEALAND. On the rock-scattered beaches of Lake Manapouri the tamarisks have been bent by the storms of the years



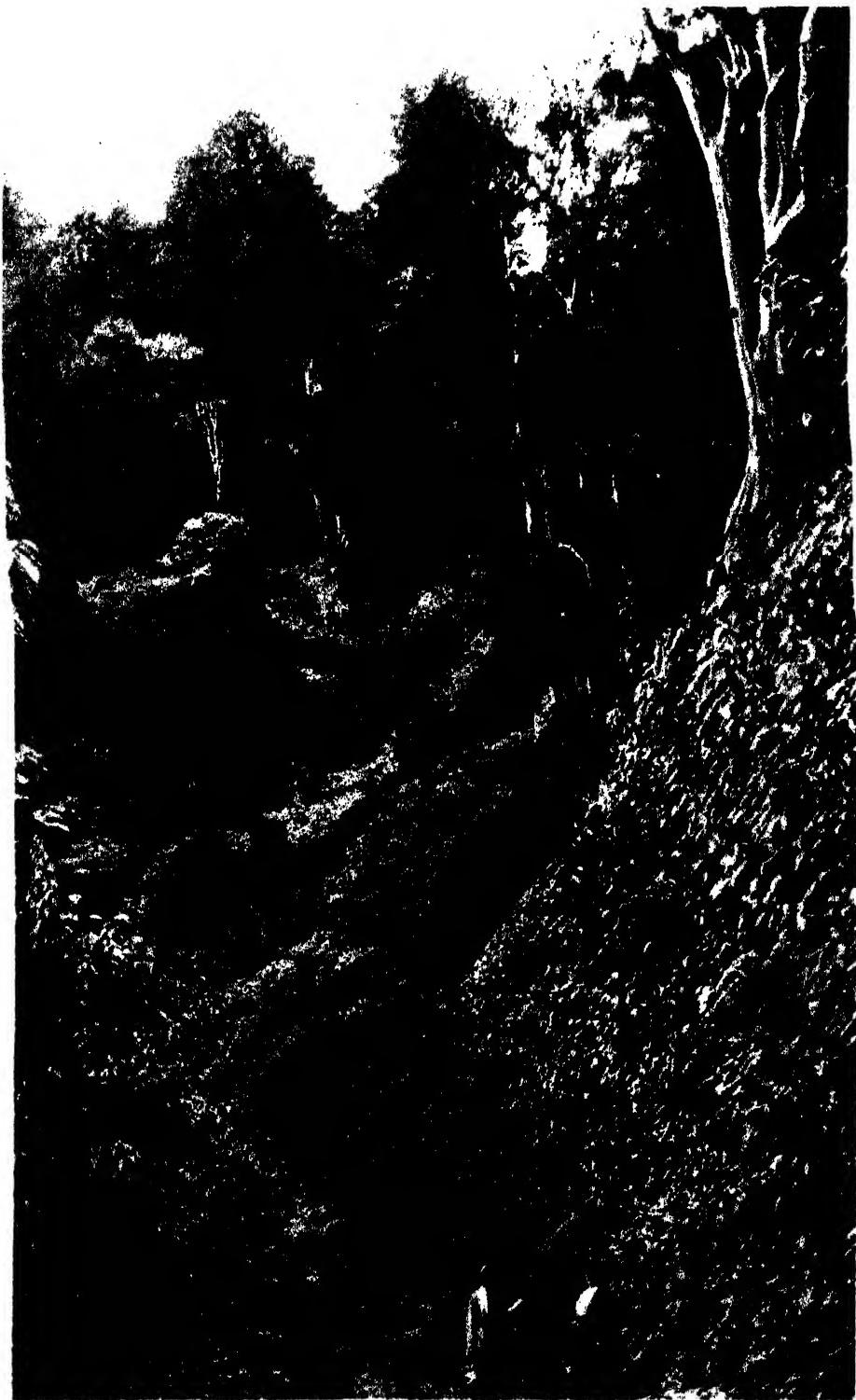
John Bushby

In the beautiful surroundings of a virgin country the settler builds his small wooden home and woos the generous earth



John Bushby

NEW ZEALAND. Tall skeletons and stumps of "ring-barked" trees show the progress in the task of clearing this plot of land



H. V. Mountfort

NEW ZEALAND. *This track, almost lost amid the encroaching bush, marks the course of the old North Road on North Island*

Whaling used to be an important industry, but it has declined to such an extent that it is almost extinct. There are plenty of very good edible fish in New Zealand waters, but so many are the fishers for amusement that fishing might be called a sport rather than an industry. There are great possibilities in the industry, but only some 60 trawlers, 1,000 line and net fishing-vessels and 1,500 men are employed.

Such fish as are caught for market are for local requirement. King fish, schnapper and cod are plentiful, groper of over 100 lb. are caught in deep waters, barracuda are especially plentiful in the south. Excellent oysters are plentiful almost everywhere round the coasts.

The largest gold-mine in the dominion is at Waihi, and Auckland now produces most of the gold, the alluvial deposits which first attracted the rushes to the south being almost worked out. All the Auckland mines are quartz. Up to the end of 1916 the total value produced in the dominion was £36,000,000, half of which came from Auckland.

Solid Mountain of Iron Ore

Westland, the west coast province of the South Island, is the most important mineral area of the dominion. Gold was discovered in the 'sixties and brought a wild rush to the rich alluvial fields from which several millions worth of gold were won in a few years. This alluvial mining continues in a modest way, but the greater wealth of the province is in the coal-mines. The Westport seams yield a steam coal only rivalled by the best Welsh, while farther south at Greymouth are the state-owned mines producing 200,000 tons per annum. Retail depots in all the principal cities are established to market the coal to the people at a reasonable price. The existence of a solid mountain of iron-ore in the north of the South Island, close to coal and deep water, may some day develop an important iron industry.

Although the agricultural exports are low, it must be remembered that the dominion itself consumes a very large

amount; and of the cereal crops raised a large part goes for animal feed. In oats, for example, a proportion of 65 per cent. of a year's crop has been converted into chaff without threshing.

The wheat yields are good, the average for ten years being over 28 bushels per acre. New Zealand, though in the past she has exported wheat, now barely supplies her own needs, and has in some years even had to import. Out of 18,000,000 acres cultivated only 1,500,000 are devoted to cropping, and about half of these to cereals.

Verdure All the Year Round

Sheep-farming has been brought to a pitch of scientific perfection in selection and breeding of types for the production of wool and meat. Dairy-farming has advanced rapidly since machine milking came into general use and a small number of hands can run a fair-sized dairy farm, especially with factories to handle the milk and the bacon. The rich grass-lands, the temperate climate which allows wintering in the open and the regular rainfall all help to turn the farmer more and more to pastoral production. At the same time the dominion requirements, apart altogether from export trade, offer plenty of opportunity to the smallholder who specialises in poultry, fruit, bee-keeping and the like.

The all-the-year-round verdure, which is so important an asset for farming, is also a great factor of natural beauty. In the northern province of Auckland there is no such thing as "winter," and fruits like peaches, apricots, grapes, lemons and oranges flourish in the open with a minimum of attention.

The Dominion's Largest City

Auckland itself, "Queen City of the North," the largest in the dominion, with a population of 150,000, is embowered in green, and her fortunate citizens indulge in boating, bathing, fishing, tennis and golf throughout the year. Ideally situated on the shores of a magnificent harbour, its buildings



New Zealand Government
CITY OF DUNEDIN AT THE HEAD OF OTAGO HARBOUR FROM THE TOWN-HALL IN THE OCTAGON

Dunedin, the chief city of South Island, stands on Otago harbour, about eight miles south-west of Port Chalmers, and is surrounded by a forest preserve called the Town Belt. The main highway is comprised in Prince's Street and George Street, running across the town and passing through the Octagon. Here stands the town hall and the memorial to the Rev. Thomas Burns. The handsome church to the right is the First Presbyterian Church, so called by reason of its occupying the site of the church of the original settlers. The street opposite the memorial is Stewart Street, and leads down to the docks and railway station.

and red roofs nestling in the trees and bush add to the natural beauty of the glorious bays and islands. It is Auckland's boast that it knows no snow, ice, cyclones, heat waves nor droughts.

The suburbs are girdled round the city and the harbour shores, the houses thickly interspersed with gardens, lawns and picturesque gullies, and bush of tree and fern. The climate is a temptation to outdoor life, the convenience of the harbour is attractive and on every evening and all day on Saturdays and Sundays its surface is dotted with hundreds of yacht and boat sails and with gliding motor-boats. Yachting is not a rich man's exclusive hobby, and the great majority of the boats are owned by the city workers of every class and grade.

A Curative Inferno

An eight-hour rail journey to the south lies Rotorua in the heart of the thermal district which forms the greatest wonder of the dominion and one which is unique in the world. The district is a strip of tableland 150 miles long by 20 wide and rising from 1,000 to 1,500 feet above sea-level, scattered throughout with volcanic mountains, dotted with lakes and geysers, thousands of boiling springs and pools of water and mud, miniature volcanoes and mineral springs of every description.

The visitor can spend weeks traversing regions where the ground rumbles and quivers under his feet, where geysers of water or mud continually boil over or shoot great columns of steaming liquid into the air with the regularity of exact clockwork, where chokingly strong vapour clouds drift over the rocks and streams. He may cruise over lakes of water which are ice-cold here, steaming warm or boiling hot there, may see cliffs of pure yellow sulphur or beautiful silica terraces, may watch a gigantic stream running millions of gallons a day of boiling water from the collected outpourings of the springs and geysers down into a lake-basin from which it vanishes into unknown depths.

Rotorua, with some 3,000 inhabitants, is the central spa of the thermal district, and contains a wider range of hot mineral waters than any other in the world. The government has established a magnificent bath house, with every up-to-date appliance of electrical massage and therapeutic treatment. The curative properties of some of the waters and muds are world-famous.

Paradox of Fire and Fertility

The district is not, as one might suppose, denuded of vegetation by the hot waters and chemical vapours, but, except in a few isolated areas of pumice and stunted vegetation, is a fairyland of sylvan beauty, of magnificent greenery, of beautiful lakes and streams, hills and valleys, fern glades and gorges. Apart from all its thermal wonders, it has a beauty of landscape that in itself is outstanding in a country that is one wide gallery of lovely scenes.

The thermal district is rich in Maori history and tradition. It was a Maori centre and stronghold long before the coming of the whites, chiefly because of its pleasant climate, its warmth in winter and the convenience of having constant hot water for cooking.

Lack of Racial Barriers

There is still a considerable Maori settlement at Rotorua, and the women may be seen cooking their household meal in a boiling spring outside the back door of the house. The fish or meat is simply enclosed in a net or basket, lowered into the pool, and left until it is cooked. The natives are encouraged to remain in the district and to preserve as exactly as possible their native houses and villages.

It is an unusual feature of New Zealand that the natives are not separated from the white population by barriers of race, caste and creed, as has happened in almost every other country in the world. The two races mingle on terms of equality, intermarry without comment, take their place side by side in the industry, the commerce and the



CRATER OF THE WAIMANGU GEYSER NEAR LAKE ROTOMAHANA

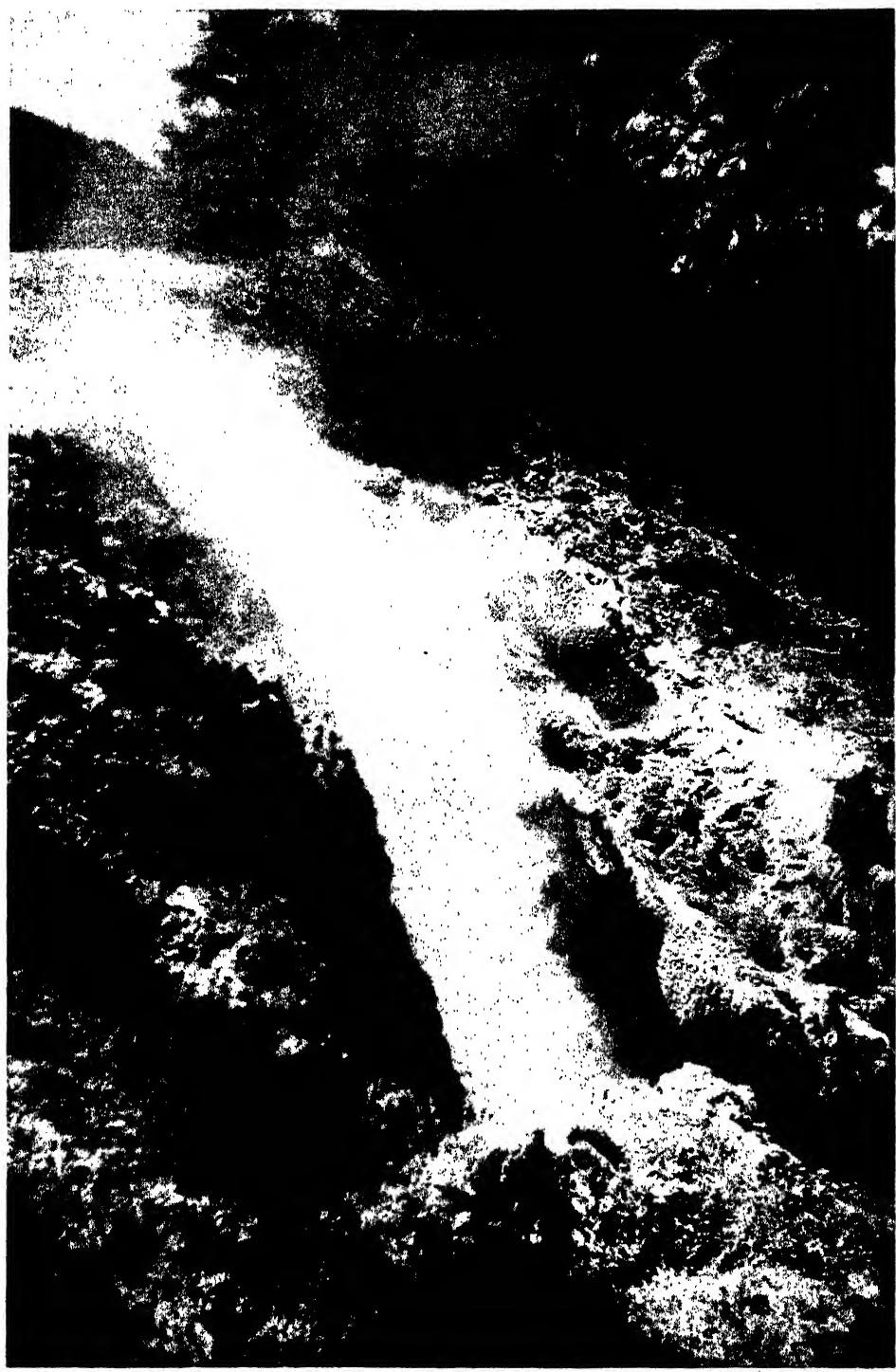
Lake Rotomahana is in the Rotorua district of North Island, and close by is the wonderful Waimangu geyser which throws up a column of mud and water to an amazing height. It is estimated that the greatest height attained is 1,500 feet. In the neighbourhood are many geysers, boiling pools and ponds of seething mud. Some of the geysers erupt with the regularity of clockwork



E. N. A.

HUGE COLUMNS OF WATER FROM A GEYSER AT WHAKAREWAREWA

Whakarewarewa is another scene of volcanic activity near Lake Rotomahana. Beautiful lakes, some fringed here and there by trees, shrubs, boiling springs, mud volcanoes and geysers, are to be found nearly everywhere. In the centre of one of them, Rotorua, is the curious island of Mokoia which rises to a height of over 1,500 feet and is regarded by the Maoris as holy ground



J. Bushby

STEAMING GASH OF THE DRAGON'S MOUTH ON NORTH ISLAND

Near Lake Taupo on North Island is the town of Wairakei which is the centre of a thermal region. The valleys are enveloped in steam from countless fumaroles and hot springs, and mountains, whose craters once belched forth the debris now scattered in all directions, are evidences of the forces that made New Zealand so remarkable. The Maoris use the boiling springs for cooking and bathing.



New Zealand Government

FARMERS WITH THEIR MILK AT THE DISTRICT BUTTER FACTORY

Dairy farming has made rapid progress in New Zealand, especially since the introduction of the cooperative system. By this method the farmers in certain districts combine to supply their milk to a factory of which they are proprietary shareholders. The government gives aid in procuring the best strain of cattle, while there are also eight experimental farms and a school of instruction.

government of their country. Rotorua, too, is only one case out of thousands where the native place names have been retained, instead of being replaced with banal and meaningless European ones.

The Maoris, it is true, are better fitted to take their stand on level terms with the Europeans than are most native races. Their standard is high both in physique and mentality. Their origin fades back into the mists of fable and tradition, but it appears certain they came to New Zealand from some of the Polynesian islands, these having been populated farther back by migration from Malaysia. The tradition goes that many generations ago a great chief voyaged from a place called Hawaiki, and returning to his own land with an attractive description of the new country, headed a large fleet of double canoes to settle in the land of "The Long White Cloud."

The names of the canoes are retained and the various tribal traditions of the doings of the families from each tally so well that there can hardly be any dispute of the authenticity of the legends and the descent of the tribes. The position of "Hawaiki" is unknown, but the Maori language is a pure dialect of

Polynesian, the common tongue of the Pacific islands.

Wellington to-day is the capital city, with a population of over 100,000, with a magnificent Parliament House built of marble, with a busy commercial centre and extensive suburbs served by an efficient tramway service, with the railway terminus of the main trunk line from Auckland, and huge many-storeyed hotels and office buildings.

The situation of the city is peculiar. It stands on a narrow strip of shore on the edge of a magnificent landlocked harbour, with deep-water wharves where huge liners lie a stone's throw from the main business quarter. This quarter is long and narrow, its shape being forced to conform to the narrow confines of the shore from which rise high and steep hills. On the face of these is built the residential part of the city, while the suburbs run up a narrow valley and cling to the face of the hill which curves round a small bay indented in the harbour of Port Nicholson.

So steep are the hills that form the back of the city that it is a commonplace for a house to have its door and one floor on the street level, and another floor below street level with windows on the

seaward side looking straight down on a neighbour's roof, and, farther below, on the streets of the business quarter and the harbour beyond. Most of these hillside houses are built of wood, the reason being that these were less liable to destruction by earthquakes.

Wellington is connected with the north by the main trunk railway which runs through the centre of the western side to Auckland 426 miles away. A branch line runs from near Auckland to Rotorua; and from near Wellington one branch goes north-west to New Plymouth and other short lines southwest to the coast, while another strikes north-east. There is no railway connexion with the greater part of the eastern side.

It was only in 1908 that the main trunk was completed, but the dominion has for long developed a thriving coastal and seaport steamer service which served and still largely serves its needs. Wellington is connected with the south by a steamer service to Blenheim (4-hour passage) and with Christchurch by a daily service of fast turbine steamers which make the 8-hour passage at night

to connect with the train services. The port of Christchurch is Lyttelton, a large deep-water harbour shut in by high hills. A railway runs from the steamer's side to Christchurch, plunging into a short tunnel immediately it leaves the sea and emerging on to the wide level plains of Canterbury which run north and south for 150 miles and east and west from the sea to the foot-hills of the Southern Alps 40 to 50 miles.

The main industry of the province is wheat raising, although its fame has been spread to the ends of the earth by its "Canterbury lamb" owing to the system of bringing sheep from all parts of the dominion to the rich grassy plains of Canterbury to fatten for killing and export.

Canterbury City was first founded as a Church of England settlement, the pioneers striving to model the town and their manners and customs on an English cathedral city. The tradition is still stamped deep, and the city is known to-day as "the most English" in the dominion.

The level plain on which it stands lent itself to giving its citizens plenty of



New Zealand Government

CUTTING A HEAVY CROP OF OATS ON A FARM IN NEW ZEALAND

Among the chief grain crops are oats, wheat and barley; oats have the largest acreage. Owing to the good prices that the farmer can obtain for his mutton, wool and butter, wheat-growing has decreased considerably. The Canterbury and Marlborough districts, both in South Island, yield fine crops of oats and barley. The height of the crop can be judged by comparing it with the horses

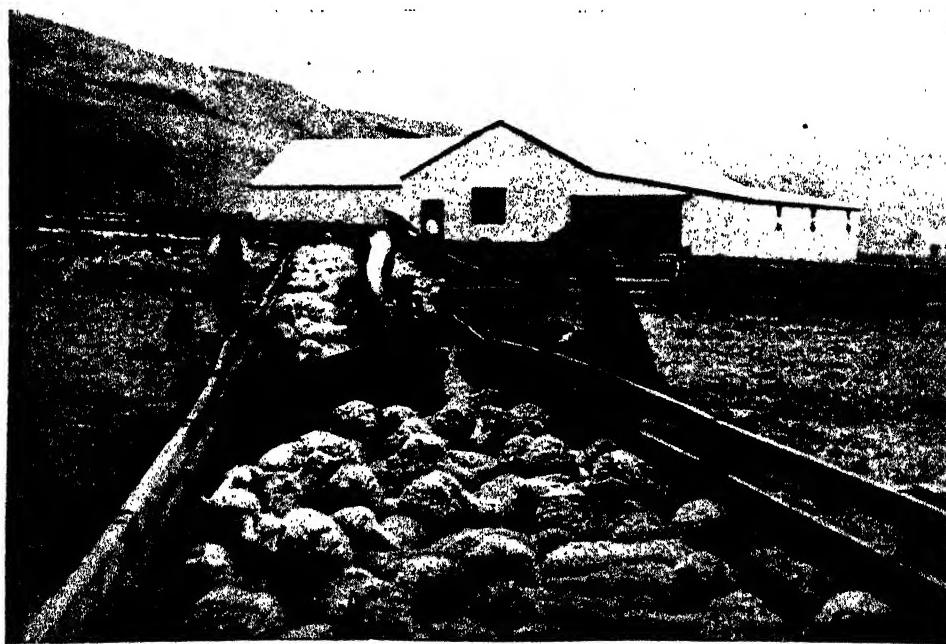
elbow room and to the symmetrical pattern of parallel streets and squares which distinguish it. The features which most impress the observer are first the prevalence of open spaces, not only in the parks and the tree-bordered Avon winding picturesquely through the city, but in the gardens, orchards and lawns attached to the homes. A municipal rule insists on an eighth of an acre being attached to each house, but actually there are few without a quarter of an acre and many with half an acre to an acre each.

The other striking feature is the number of motors which fill the wide level streets. Canterbury boasts the possession of more motor-cars in proportion to population than any other city in the world, with the single exception of Detroit. Motor-cycles are even more ubiquitous, and to see the streets at lunch time or before and after business hours, one might suppose that every man, woman and child who did not own a motor-car or cycle at least had a "push-bike."

To the south the main line runs along the coast to Dunedin with short lines branching inland, one of these carrying enthusiasts to the Alpine climbing grounds round Mount Cook. Just as Canterbury prides itself on being "English," so does Dunedin on its Scottish ancestry and tradition. It is extraordinary how apparent this is even to a casual visitor, the names over the shops and the appearance and decidedly the speech of its citizens all savouring strongly of a Scottish town. The city is spaciously laid out and solidly and substantially built with streets of fine shops and blocks of office buildings.

Southward the line cuts inland across the south-east corner of the island to Invercargill (population 20,000), the most southern town of the dominion and distant from Christchurch 377 miles. There are 3,021 miles of state railways in the dominion, 1,282 in the North Island, 1,739 in South Island.

From one end of the dominion to the other, facilities for sports and amusements lie to the hand of every citizen.



New Zealand Government

DRAFTING SHEEP ON ONE OF NEW ZEALAND'S SHEEP RUNS

Passing singly from the crush pen, in the foreground, down the "race," the sheep are drafted singly into their respective pens, right or left, by the person operating the swing gate at the end of the "race." This method of separating the sheep for killing, or any other purpose, does away with the necessity of any handling of the animals. The Canterbury district is noted for its runs



Underwood

GIANT GOLD DREDGE AT WORK AT HOKITIKA, SOUTH ISLAND

Gold was discovered in 1867, and is found pretty generally throughout the dominion. One of the greatest gold-mines in the world is the Waihi in North Island. The district of Westland, on the coast of which Hokitika lies, is one of the chief gold-mining districts in South Island. This dredge is electrically operated and controlled, the power being generated at Lake Kanieri, seven miles distant.

There is no town of any importance without golf links and tennis courts, cricket and football grounds; there are plenty of good motoring roads and innumerable places of interest to visit; excellent sea fishing is to be had all round the coasts; and in every centre there are fleets of yachts and motor boats. All the big centres have easy access to sandy beaches and sheltered bays and harbours.

In the rivers and lakes the fishing is so good as to attract enthusiasts from all over the world. Years ago English and Loch Leven trout, brook and rainbow trout from America were introduced, and thrived amazingly. Rotorua is specially favoured by anglers, but practically every lake and river district of the dominion swarms with trout, large numbers of the fish taken being up to 8-lb. weight or over.

Shooting, too, of a most varied class can be had throughout the dominion. Red and fallow deer were imported as early as 1851 and have flourished in their wild surroundings. In later times sambhur, moose, wapiti, chamois, Himalayan tahr, sika, axis, Virginia and mule deer were introduced and are all

acclimatising and doing well. There is plenty of other shooting. Hares are plentiful, wild rabbits so numerous that in some parts owners are obliged by law to reduce their numbers.

Opossums also are plentiful in some districts, as also are native wild-fowl, including the "Paradise Duck" (really a goose). There are plenty of native grey duck (excellent game birds) and teal on the lakes and rivers. The English mallard and the Canada goose have been imported and are doing well. Black swans are to be found, and the Chinese pheasant and Californian quail have done well. The native wood-pigeon and swamp-hen are growing scarce. Grouse and partridges have been introduced without success.

The Chatham group consists of two large and a number of small islands, lying between $43^{\circ} 30'$ and $44^{\circ} 30'$ S., $175^{\circ} 40'$ and $177^{\circ} 15'$ W., 415 nautical miles east-south-east of Wellington. When they were discovered in 1791 they were inhabited by a native tribe, the Moriori, but in 1835 the Maoris made a descent on the group in a brig which they had seized off a New Zealand port and began a campaign of death,

subjugation and enslavement which has resulted in reducing the original inhabitants to about a score of whom only one family is full-blooded.

Chatham, the larger of the islands, has an area of about 222,500 acres, about a third of which however is under brackish or fresh water lakes and swamps. A fourth of the land is forest-clad and the remainder covered with fern and grass. Pitt island extends to 15,330 acres also fern and grass covered. There is no ground of any height in the group, the largest hills rising to less than 1,000 feet. Sheep raising is practically the sole industry of the small population of a few hundred whites and Maoris who live permanently on the islands.

Communications are infrequent, steamers calling from New Zealand about once every two months and more frequently in the months from January to April. Wireless communica-

tion has, however, been established with New Zealand. Waitangi, the port, has two or three hotels where visitors may hire launches and horses. It has a bank and post office, and a resident medical man. A small jetty provides for the landing of goods and passengers in small boats from the anchorage where the steamer lies about a quarter of a mile off. This is the only safe anchorage, the group being notorious for treacherous winds and currents.

The climate is genial, with an average temperature of 33° F. in winter and 75° in summer. Although there is a 30-inch average rainfall, much of the rain falls at night and there are few days on which the bright sun does not shine. The group has attractions for those who wish to spend a pleasant and very quiet holiday, good sea fishing and the opportunity of good bags of black swan and Californian quail being an added inducement to sportsmen.

NEW ZEALAND: GEOGRAPHICAL SUMMARY

Natural Divisions. Mountainous islands, broken-off relics of a greater land mass. Part of one of the major festoons of islands of the Pacific coasts. (Cf. Japan.) Southern Alps, S.I., a distinct chain (cf. Alps), with steep slope to the west coast. (Cf. Andes.) Kaikouras and ranges of N.I., a different system (cf. Japan), with volcanic activity.

Climate. The most definite example on a large scale of a temperate oceanic climate, with slight variations of temperature and wind-driven rainfall of oceanic origin, which is distributed in relation to the relief of the land. Westland, where the wind arrives, is wet. Central Otago, in the lee of the mountains, is arid. (Cf. Alberta or Salisbury Plain in England.) The climate is mainly controlled, more definitely in winter, by cyclonic storms from the south. (Cf. the Atlantic cyclones and the climate of Ireland.)

Vegetation. Naturally a forest land. (Cf. Japan, the British Is.) Fern forest on the wet lower slopes, hardwood trees where the rainfall is less. Sown grasses flourish on cleared ground. Cereals do well, their extent and purpose being strictly determined by (i) the chance of a market for surplus yields and (ii) the needs of farm animals for green fodder. Oats yield well in Otago, wheat in Canterbury.

Products. Building and furniture timbers, which will be more used when scarcity

elsewhere raises timber prices. Coal, in part good steam coal, one of the chief sources of the Southern Hemisphere. (Cf. New South Wales and Natal.) Gold, Kauri gum, and phormium, or New Zealand flax. Wool and mutton from the numerous sheep—in parts, sheep are more numerous per square mile than anywhere else in the world. (Cf. the British Is.) Beef, milk, butter, cheese from the cattle of other areas—e.g. Taranaki; mainly produced by cooperation (Cf. Denmark.) Tinned fruits and jams for export. Sub-tropical and temperate fruits, according to latitude, for home consumption.

Communications. By sea, liners, coasting steamers, steam ferries. By rail, N.I. trunk route; S.I. coastal route, with branches. By motor road from Auckland to Wellington and from Nelson to Invercargill. The cross railway from Christchurch, west through the Otago Gorge, is complete. By mail coach road. Telephones are almost universal.

Outlook. New Zealand can afford to wait patiently. The iron ores, the abundant fertility of soil and the suitable climate, the glorious sunshine must attract people, and the New Zealander has only to wait until it becomes worth while for the rest of the world to pay the cost of transport of her products across the wide ocean. The future is full of promise. These islands need far-sighted immigrants.

NIGERIA

Lands United by a River System

by J. D. Falconer

Author of "On Horseback Through Nigeria"

IN the interior of the Gulf of Guinea lie the Bights of Benin and Biafra, the great delta of the river Niger and the coast-line of Nigeria, one of the largest of Great Britain's tropical dependencies.

The coast-line extends from the neighbourhood of Lagos, the capital, in the west to the Cameroon mountain in the east, a distance of about 600 miles. The hinterland consists of a rhomboidal area of approximately 400,000 square miles, nearly three times the size of Great Britain with Ireland, extending between latitudes 4° and 14° N. from the Guinea coast northwards to French West Africa. The boundaries of this area are entirely artificial, being merely arbitrary lines marking it off from French territory which surrounds it on every side but the south.

Nigeria is neither a geographical nor a political unit, but a vast dependency of varied relief and diverse racial character where the suzerainty of Great Britain is asserted and recognized as the one bond of union among heterogeneous peoples in various stages of development.

Course of the Mighty Niger

The most striking feature of the map of Nigeria is its magnificent river system. The Niger enters in the north-west corner and flows generally southward to its delta in the Gulf of Guinea. It is navigable from the sea as far as Jebba, a distance of 537 miles, and, after the rapids north of that town, in several disconnected sections. At Lokoja it is joined by its great tributary, the Benue, which flows from east to west through the middle of the country and is navigable throughout its whole length.

The greater part of Nigeria thus lies within the Niger-Benue drainage area.

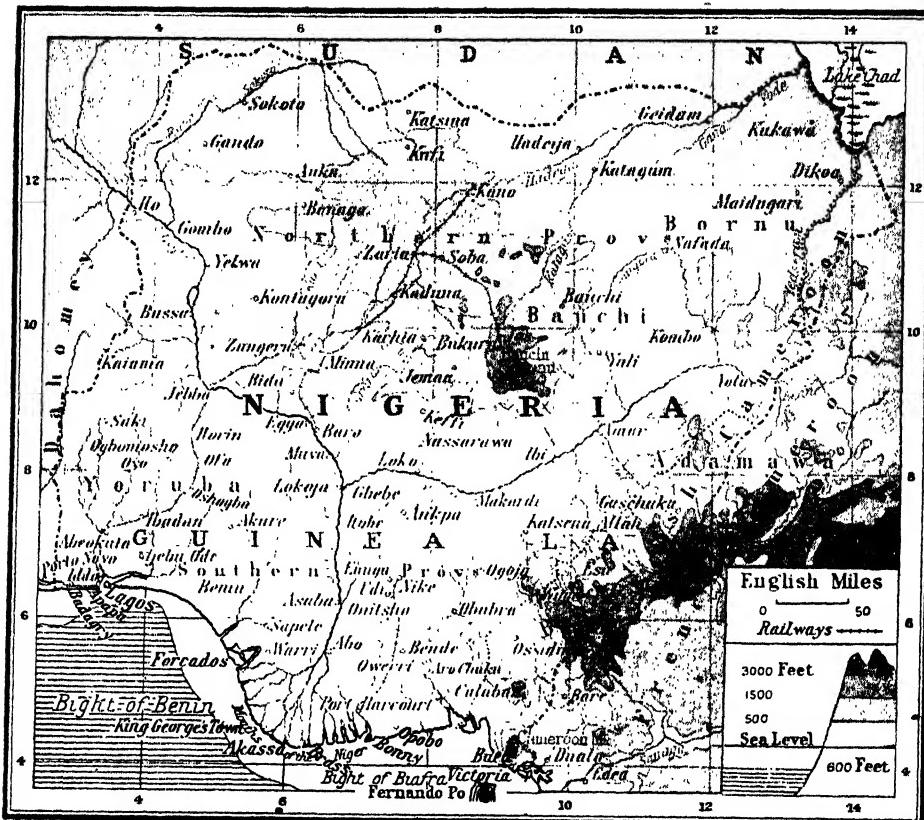
In the south-east, however, is the subsidiary basin of the Cross river, and in the south-west a number of smaller rivers independent of the Niger enter the coastal lagoons. In the north-east a considerable area lies within the inland drainage basin of Lake Chad.

Country's Hydrographical Centre

The average elevation of the country does not exceed 1,500 feet. Its general aspect is that of undulating plains, relieved by isolated hills and tracts of hilly country. The only notable mountain range occurs on the Cameroon frontier to the south of the Upper Benue. A belt of hilly country runs east and west in the neighbourhood of the 10th parallel, the highest part of which is the Bauchi plateau rising to an elevation of over 4,000 feet. The southern and western margins of the plateau are bounded by steep escarpments whose jagged and broken edges appear like ranges of mountains when viewed from the plains below.

On this plateau lies the hydrographical centre of the country where a few square yards of open grass-land distribute the drainage respectively to the Niger, the Benue and Lake Chad. The latter, a portion of which belongs to Nigeria, is the only large permanent lake in the country and occupies a shallow swampy hollow about 800 feet above sea-level.

In the southern forests the soil is naturally enriched by decaying vegetation, but when cleared for farming it soon becomes impoverished, except in the river valleys, the delta and the coastal belt generally. In the more



PLAINS WATERED BY THE MIGHTY NIGER AND ITS TRIBUTARIES

open country to the north the soil is mostly light, sandy and shallow, and extensive areas lie fallow for years.

Permanent cultivation is found only around the towns and villages where manuring is practised to some small extent, and in the river valleys and swampy tracts where the annual flooding renews the fertility of the soil. In the hilly districts the slopes are frequently elaborately terraced to retain the soil. The volcanic areas are especially fertile but of no great extent.

The climate of Nigeria is of a seasonal type, characterised by a well-marked alternation of wet and dry seasons corresponding roughly to the summer and the winter of the northern hemisphere. In the north the dry season extends from October to April and is accompanied by the "harmattan," a dry, dust-laden wind which obscures the landscape with a thick haze. During

the harmattan season the nights and early mornings are cold, but the days are hot and diurnal variations of 40° to 50° F. are not uncommon in the months of December and January. In the south the dry season is shorter and generally lasts from October to March, the accompanying harmattan being less dense and of an intermittent character and the diurnal variations less extreme.

The rainy season in the north is characterised by a succession of heavy showers, more rarely by a continuous downpour, while in the south steady tropical rain for hours or days on end is more common. The change of the seasons is marked by the prevalence of tornadoes or thunderstorms, accompanied by a violent wind and heavy rain which in the higher parts of the country may be mixed with hail.

During the dry season the prevailing wind comes from the north-east and

brings the harmattan ; during the wet season the prevailing wind comes from the south-west and brings the rain. Nigeria is thus subject to a monsoonal variation in the direction of the prevailing winds and the amount of rain which falls in the northern and north-eastern parts of the country is directly related to the strength of the south-west monsoon. It follows also that the rainfall decreases steadily from the coast towards the interior and the occasional failure of the monsoon leads to distress and famine in the north-east. Conditions are somewhat complicated by the presence in the centre of the country of the Bauchi plateau whose southern edge receives nearly as much rain as the forest-lands to the south.

The tropical forests may be subdivided into zones, each with its types of vegetation. In the brackish tidal swamps along the coast are forests of red mangrove of great potential economic value, the timber being hard and durable and especially suitable for pit props and railway sleepers. Farther inland along the lower courses of the larger rivers are the fresh-water swamp forests which contain many useful timber

trees such as the red ironwood together with the raphia palm from which piassava fibre is prepared.

The swamp forests are followed by the evergreen tropical forests which contain the most valuable of the economic trees that grow in Nigeria. The timbers include mahogany, ebony, iroko and many other hard woods as well as numerous soft and medium hard woods. The West African rubber-tree and the oil palm, the greatest single source of wealth to Nigeria, are also characteristic of this type of forest. Farther inland the evergreen forests pass into mixed forests which contain in addition to the evergreen such deciduous trees as the silk cotton tree and the rubber vines. Camwood and sasswood belong respectively to the evergreen and mixed deciduous forests.

These denser forests of the south pass with much marginal interlocking into the dry open forests of the north where a deciduous orchard bush with grassy undergrowth is mingled with considerable stretches of open grass-land. The trees are low and stunted and suffer much from the annual bush fires. Along the watercourses are fringing



"West Africa"

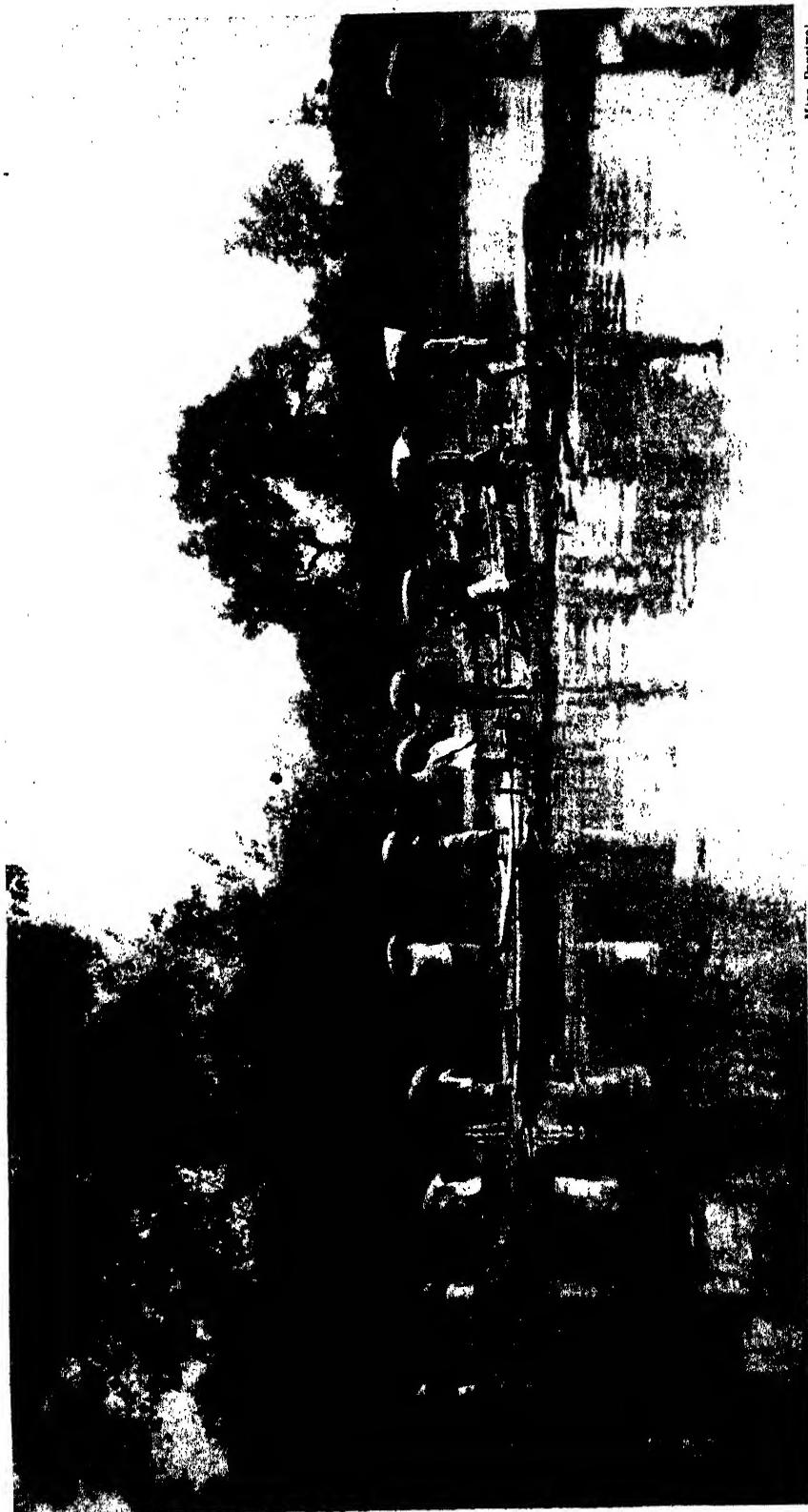
CAMEL CARAVAN BEING LOADED FOR KATSINA AT KANO

Camels are used extensively as beasts of burden in the northern provinces, particularly in Kano province, and are especially adapted for traversing sandy ground. Kano is a noted caravan centre, and its commercial prosperity has greatly increased since it became the northern terminus of the railway from Lagos, Nigeria's capital on the coast ; a good motor road also runs to Katsina

Miss Percival

PORTERS BEARING RICE TO ARO CHUKU CROSSING A TEMPORARY BRIDGE OVER A CREEK

Aro Chuku is a small town not far from the Cross river in the southern province of Calabar. At one time the drainage areas of the Old Calabar and Cross rivers were the chief sources of ebony in southern Nigeria, but they have been almost exhausted, and efforts are being made to extend the cocoa industry. Nigeria is furnished with a network of waterways, of which the Niger is the centre; at the same time the rivers and creeks are great obstacles to road-making, owing to the swamps caused by floods and the expense of bridging. Though motor transport has been introduced,



forests of taller vegetation. The characteristic types are the shea butter tree, the locust bean tree, the baobab, and the fan or daleb palm. Many gum-yielding acacias are also common, both scattered and in continuous patches of prickly bush.

The indigenous fauna of Nigeria includes the hippopotamus, rhinoceros, elephant, giraffe, buffalo, numerous antelopes and gazelles, lion, leopard, hyena, wart-hog, porcupine, civet-cat and many species of monkeys, baboons, snakes and lizards. The crocodile and the manatee are found in the rivers which teem with fish of many kinds. The commoner birds include guinea-fowl, partridge, geese, duck, great and lesser bustard, pigeons, parrots, storks, cranes, vultures, toucans and hawks.

Where Beasts and Tillage Migrate

The domestic animals which have all been introduced include cattle, horses, donkeys, sheep, goats, pigs, dogs and fowls. Of these goats, dogs and fowls are universal, pigs are kept only by certain southern pagan tribes, while cattle, horses, donkeys and sheep are practically confined to the more open country in the north where the tsetse fly is absent. In the north the cattle wander freely through the open forests, but in many parts a seasonal migration is necessary in search of grass or water.

The short-handled hoe is the universal implement of agriculture, the plough being quite unknown. In the forests yams and maize are the principal crops and in the more open country guinea corn, millet, ground nuts, sweet potatoes and cassava. In the south seed-time and harvest never fail, but in the north the vagaries of the rainfall frequently make repeated sowings necessary and lean and fat years intermingle.

The problem of the exhaustion of the soil has in the past been overcome by shifting cultivation, the same land being rarely continually cultivated for more than a few years. Cocoa and to some small extent rubber are plantation crops in the south, grown entirely for

export. Inferior cotton is everywhere grown by the natives who are now being encouraged to plant better varieties for the European market.

Rocks Sedimentary and Granitic

Behind Lagos sedimentary rocks, mostly sandstones and clays, occur in a narrow coastal belt which widens out to the east to cover the whole of the lower valleys of the Niger and the Cross rivers. Traced inland they extend with interruptions up the valleys of the Niger and the Sokoto rivers and uninteruptedly up the valley of the Benue and its tributary the Gongola. Away from the great river valleys however crystalline or granitic rocks prevail and cover the whole of the interior of the country, including the Bauchi plateau.

Sedimentary rocks as a general rule provide a deeper and a more fertile soil than granitic rocks, but this factor has had relatively little influence in determining the distribution of the native population of Nigeria. On the other hand, the minerals contained in the granitic and sedimentary rocks have had a considerable influence upon the distribution of the European population in the interior of the country. Thus the granitic rocks of the Bauchi plateau carry tinstone which has been slowly weathered out in past ages and concentrated along the stream lines from which it can be recovered by mining operations.

Nigeria's Prosperous Tin-Mines

The Nigerian tin-fields have been worked more or less systematically since 1906 and in 1923 the mining industry gave employment to about 150 Europeans and 18,000 natives. Nearly 8,500 tons of ore were exported from Nigeria in the same year, but this output is not likely to be maintained for very many years. The township of Jos is at present the centre of the tin-fields. The crystalline rocks carry also in various parts of the country small quantities of gold, but it is doubtful whether Nigeria will ever be a noted producer of the precious metal.

The sedimentary rocks of the lower Niger valley carry Nigeria's potential mineral assets in the form of extensive deposits of coal and lignite which are practically undeveloped. A government mine was opened at Enugu in 1916 to supply coal for local purposes and in 1923 the output was 170,683 tons. The mine is worked by native labour under European supervision and in 1923 the average output of each underground worker rose to 202 tons per annum, the average output of each hewer reaching the high figure of 1,005 tons per annum.

Coal, Agriculture and Forests

The coal is of cretaceous age, sub-bituminous in character and of good quality. Enugu, the present centre of the coal-field, is likely to become one of the principal inland European townships. No attempt has yet been made to exploit the tertiary lignites of the same neighbourhood.

The great majority of the population of Nigeria is engaged in the pursuit of agriculture. The farming of food crops and of cotton, the gathering of forest produce, and in the more open country in the north the tending and rearing of large herds of cattle are the primary occupations of the people. The riverine tribes are expert fishermen and canoe-men.

The forests are little valued, and are ruthlessly cleared for farming, only such trees being spared as the oil palm and the locust bean tree which yield edible products. Large timber is needed only for canoe-making near the river. A little galena is dug in places for use as a cosmetic and various clays, salts and iron ores are collected for local purposes, but few other minerals are worked by the natives themselves.

Home and Village Industries

Strictly subordinate to farming, at least in the rural areas, are the home or village industries of which blacksmithing, weaving, tailoring, dyeing, tanning, leather-working, mat, basket, rope and pot-making are the chief. In the larger towns these industries

naturally tend to become the sole occupations of certain individuals. Iron-smelting and salt-making are extensively carried on in certain localities during the dry season. Few of the products of local industry, however, are fitted for export except as curios.

A certain section of the population, largely recruited from the class of freed slaves, tends to concentrate in the larger towns, in the mining camps and in the centres of European trade, and provides the transport workers and unskilled labourers of the country. Many of the peasants also, after the harvest has been secured, seek temporary work in the mines or in the larger towns.

Another section of the community engages in petty trading and provides the hawkers and pedlars who visit the remotest parts of the country and are characteristic frequenters of the bush paths. The larger native merchants live in the towns and possess their own stores and stalls in the market place. They finance and equip the donkey caravans which traverse the trade routes of the north. Many of them act as agents for the European stores and send their representatives far and wide in search of goods for export.

Effects of European Enterprise

Brokers and moneylenders are found in all the larger markets, but banking is confined to British enterprise. The Bank of British West Africa and the Colonial Bank have branches throughout the country which are used by natives and Europeans alike. The Nigerian Civil Service has an African as well as a European staff, the latter mainly administrative and technical and the former clerical. Many educated Africans from the coastal towns and the southern portion of the country find employment with European trading firms as clerks and storekeepers. Many African artisans, trained in the government workshops and in the industrial schools, are employed throughout the country on the railways, river boats, mines and public and



W. T. Boreham

HUTS OF A CAMP IN A TIN-MINE IN NORTHERN NIGERIA

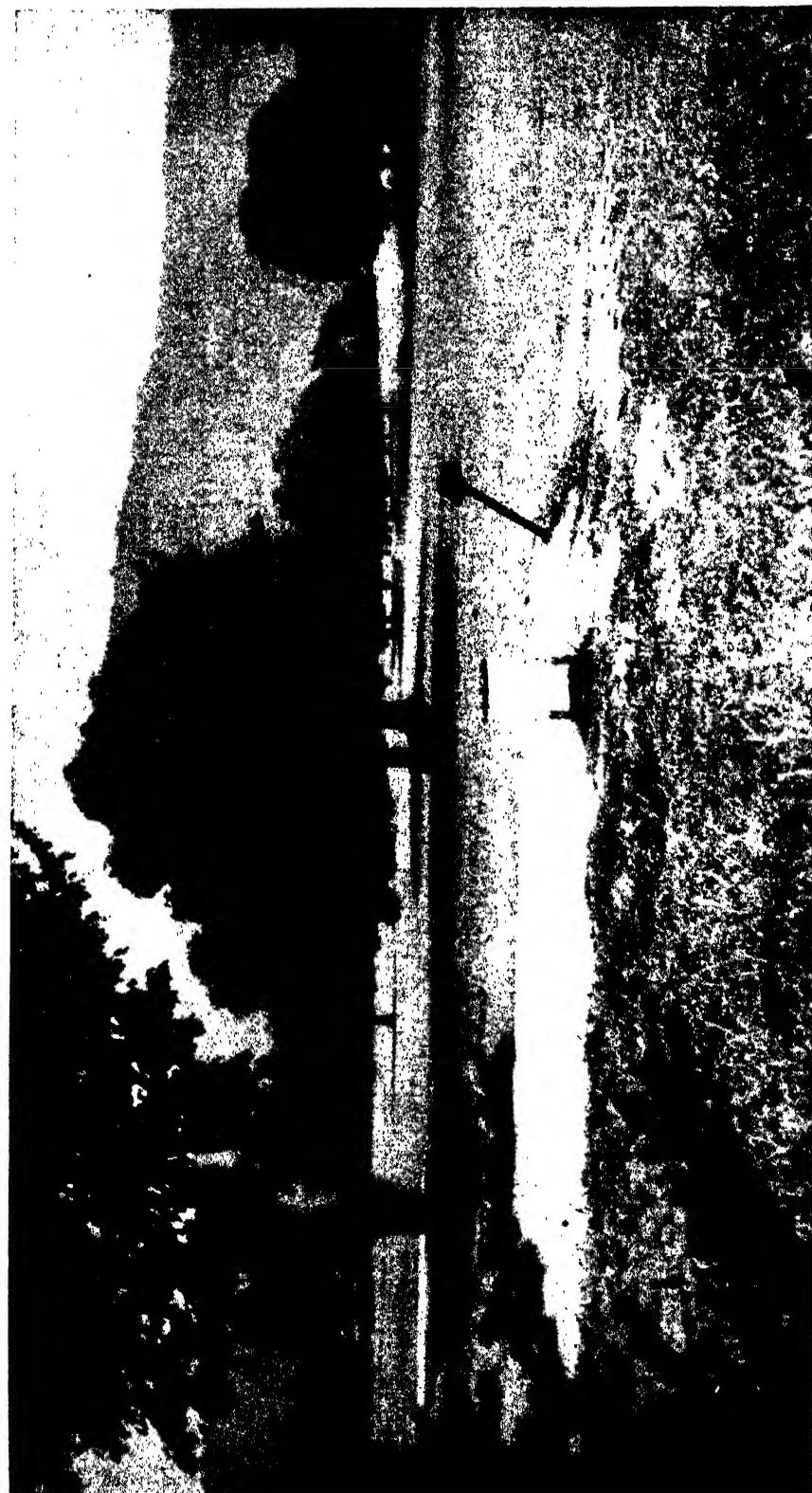
Tin is the most important mineral deposit in Nigeria, and occurs chiefly in the northern provinces, especially around Jos and Bauchi. The tin-mines are alluvial in character, and it is considered that they will rapidly become worked out. The tin is of excellent quality, and very suitable for mixing with Cornish tin. Another important mineral is coal, which is mined at Enugu and Udi.



"West Africa"

MUD-BUILT MAHOMEDAN SCHOOL AT ZARIA

The whole educational scheme of Nigeria is placed on national lines, account being taken of the faith, language and manners of the various peoples. In 1923 the northern provinces contained over 40 government schools and one training college for Mahomedan native teachers. Mud is the chief building material at Zaria; holes in the walls serve as windows and the roofs are flat.



"West Africa."

GOLF LINKS LAID OUT IN THE BEAUTIFUL PARK-LIKE COUNTRY AROUND LOKOJA

Lokoja is a town of northern Nigeria, situated at the junction of the Niger and Benue rivers. About 110 miles north of the delta of the Niger, the country gradually opens out into park-like land, followed by wide expanses covered with high grass. The town was founded in 1860, and is a natural distributing centre for river-borne merchandise entering the northern provinces, and caravans come down annually from Kano and Bornu to Lokoja and Ilorin. The products of the surrounding district include palm oil, shea nuts, rubber and tobacco. Lokoja is one of the chief ports for the steamship services on the Niger.

Miss Percival



NATIVE TRADERS' CANOE IN A CREEK AMID THE DENSE PLANT GROWTH OF TROPICAL NIGERIA

The forests of south Nigeria are of lofty growth and many tropical giants rear their heads among the lesser lights of the tree world. Throughout the country the oil palm grows prolifically; it is a kindly tree to the natives, who utilise it in a thousand and one different ways, and barter its oil and kernels for biscuits, calico and many similarly prized goods. Above is seen a good example of the canoes in use among the riverine population of Nigeria; mainly of the dug-out type, they are fashioned out of tree trunks with very primitive tools, but amply fulfil their purpose as serviceable river craft.



Miss Percival

WEIRD TOMBS OF THE DWELLERS IN THE NIGERIAN BUSHLANDS

The Ibidos, sometimes called the Obidios, a negro tribe of south-eastern Nigeria, generally build their houses among the tangled undergrowth of the thick woodlands, and their tombs in the open spaces. These latter are strange erections, with palm leaf roofs and adorned with coloured mud figures, while various objects, including bottles and crockery, are provided for the deceased.

private works. In the interior the great mass of the people is illiterate with the exception of the Mahomedan "mal-lamai" in the north, who function as priests, scribes and local magistrates, read and write a variety of Arabic, and are often exponents of Koranic law.

The whole country is covered with a maze of native paths whose relative importance can only be gauged by the width of the trampled surface. Since the British occupation, however, an intensive policy of road construction has been pursued, especially through the southern forests, and it is now possible to travel by motor-car during the dry season practically from one end of the country to the other.

Many of the roads are first class metalled highways, graded and bridged for heavy traffic; others are second

class highways designed to carry light motor traffic only, while others are simply clearings through the bush, impassable in the rainy season. The larger rivers are highways throughout the year for native canoes, barges and stern wheelers of shallow draught, but are navigable by vessels of deeper draught (10 feet) only when in flood. The extreme seasonal variation in level to which they are subject, and which in the case of the Niger at Lokoja may be as much as 35 feet per annum, seriously detracts from their value as permanent highways of communication.

Hence the policy of the government of recent years has been to develop railway communications from the principal ports so that heavy merchandise may be transported to and from the interior at all seasons of the year.

The western railway extends inland from Lagos to Kano a distance of 705 miles, with a branch from Zaria of 144 miles to the tin-fields of the Bauchi plateau. An eastern railway is in course of construction to link up Port Harcourt and the Enugu coal-field in the south with the tin-fields and the western railway in the north. The Niger has been bridged at Jebba for the western railway and the Benue will be bridged at Makurdi.

Away from the railways and motor roads portage or head transport is universal. In the northern parts of the country, however, small-sized donkeys are much used as pack animals, and to a less extent horses, camels and oxen. The chief towns of the interior are connected with the seaboard by an extensive inland telegraph system. There is a wireless station at Lagos and direct cable communication with England and South Africa from Lagos and Bonny.

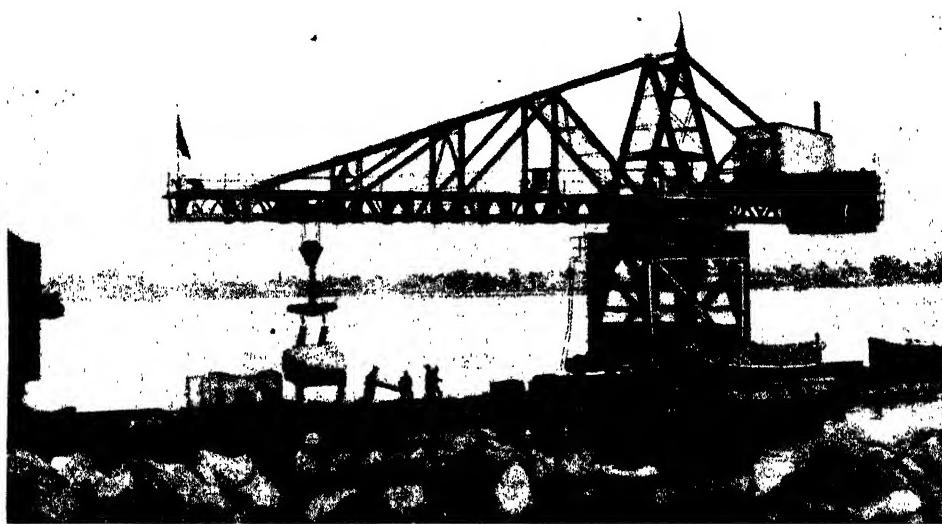
The ports of Nigeria are all situated at the mouths of rivers obstructed by shifting sandbars which necessitate limitations in size and modifications in design of steamers engaged in the West African trade. The principal ports are

Lagos for the western railway, Port Harcourt for the eastern railway, and Forcados for the Niger-Benue navigation.

Nigeria is a country which is perfectly self supporting. Its inhabitants possess all the necessities and many of the luxuries of existence. Its great extent, however, and its regional differences in climate and vegetation imply a great variety of local foodstuffs and manufactures, the sale and exchange of which give rise to an immense volume of internal trade.

The people themselves have devised a highly organized system of local and district markets throughout the country, and these afford facilities not only for trade but also for social intercourse between adjoining villages and tribes. The travelling merchants and pedlars who frequent these markets are welcomed for the news they bring of the outside world, and one of the most appreciated effects of the British occupation has been the securing of the safety of the highways for petty trading, with accompanying freedom of access to all parts of the country.

It follows that the European trader must either stimulate a desire for



"West Africa"

CRANE AT WORK ON ONE OF THE WHARVES IN LAGOS HARBOUR

Lagos, the chief port of Nigeria, stands on an island in a large lagoon formed by several rivers. Owing to the bar, steamers used to transfer passengers and cargo in the open roads; but by dredging and the construction of moles, steamers can now enter the lagoon. To the north of the harbour is Iddo island, where is the terminus of the western division of the Nigerian railway



BUILDINGS ALONG THE WATER FRONT AT LAGOS WITH GOVERNMENT HOUSE ON THE RIGHT

Nigerian Government
Well-kept and supplied with electric light, the chief stores and buildings of Lagos are all built on the banks of a lagoon. The island on which the town lies is only a few feet above sea-level, and formerly consisted entirely of swamps. Lagos forms the administrative centre of Nigeria pending the completion of the capital at Kaduna

foreign goods on the part of the natives or offer a price for local produce which compares favourably with that which can be obtained in the local markets. Many articles of export are those which are in common use throughout the country, and the native is always willing to part with his surplus or even to increase his production for what appears to him to be a remunerative price.

Palm oil and ground nuts, two of the principal articles of export, belong to this category, the quantity available or brought in for export being directly related to the price obtainable at the European stores. Palm oil is extracted by the natives from the fleshy exterior of the nut of the oil palm, and is one of the staple articles of diet throughout the southern portion of the country. The kernels of the nuts yield an edible oil, and are also collected for export.

Similarly ground nuts form a staple article of diet in the northern portion of the country, and ground nut oil is used by the natives for both cooking and lighting. The value of the exports of palm oil, kernels and ground nuts amounts to about two-thirds of the total value of all produce exported from Nigeria. In England and the Continent they are used, along with other Nigerian products such as benniseed, cotton seed and shea butter, in the manufacture of oil, margarine, candles, soap and cattle food.

The other principal articles of export from Nigeria are hides, rubber, cocoa, cotton, mahogany and tin ore. The imports consist mainly of hardware, ironmongery, textiles, salt, soap, kerosene, tobacco, grain and flour, dried fish and kola nuts, the last from the adjoining colony of the Gold Coast.

The coastal towns have grown to importance since the advent of Europeans, the large native towns being situated in the interior. Lagos, the capital of Nigeria, and formerly the centre of the slave trade in the Bight of Benin, has a cosmopolitan population of about 99,000 Africans and 1,000 Europeans. It is situated on an island



"West Africa"

PALM OIL CASKS READY FOR SHIPPING ON BADAGRY BEACH

Badagry harbour, situated on the lagoon between Lagos and Porto Novo in Dahomey, has lost much of its importance since the development of Lagos, but it still carries on a small trade in palm oil and palm kernels. The oil palm is a native of West Africa, and the export of its products has been for many years the mainstay of Nigerian trade

in a large coastal lagoon separated from the sea by a shallow bar. The town has been equipped by government with a water supply, and with electric light and telephone services. The general terminus of the western railway is at present on the adjoining island of Iddo, also in the lagoon, and connected by bridges with Lagos and the mainland. A separate goods terminus is now, however, being constructed at Apapa, on the southern shore of the lagoon.

Ibadan, the largest town in Nigeria, with a population of 136,000 inhabitants, is situated in the forest belt 120 miles north of Lagos by rail. It is built on a number of low hills and ridges, and has a European official and trading quarter on the outskirts of the native town. After Ibadan and Lagos, Ogbomoso (84,000) and Ilorin (83,000) are the two leading towns.

The total population of Nigeria, according to the 1921 census, is about 18,500,000 Africans and some 4,000 Europeans, larger than that of any British dependency except India.

To the 4,000 Europeans who are temporarily resident in the country and who belong almost entirely to the administrative service and to the trading and mining communities, Nigeria offers a climate which compares not unfavourably with that of other British tropical possessions.

The evil reputation from which the country formerly suffered has, with the help of medical science, been largely outgrown, and it is now recognized that with ordinary precautions against fly, chills and errors of diet, life in Nigeria can become not only endurable, but even enjoyable, by those constitutionally fitted for the tropics.

NIGERIA: GEOGRAPHICAL SUMMARY

Natural Division. Coastal lowland along the Gulf of Guinea. Interior plateau with scarped edges, part of the interior plateau of Africa.

Climate. Monsoon climate, south-west winds accompanied by rain during the summer, north-east winds, the "harmattan," from the arid interior during the cool season. Heavy rains on the coast and on the scarps of the plateau.

Vegetation. Tropical jungle forest near the coast. (Cf. Guinea Lands.) Scrub and park land further inland; grass-land with slight summer rains along the northern frontier. (Cf. Sudan.)

Products. Plantation crops—rubber, cocoa, cotton. Minerals—tin, coal. Mahogany, palm oil, yams, maize, guinea corn, millet, ground nuts. Cattle, sheep.

Communications. Railways. River traffic on stretches of the Niger and Benue. Some roads suited to motor transport. Forest tracks used by caravans.

Outlook. A self-supporting country, with exchanges of native products at numerous markets, all of which are dependent upon the variety of climate and vegetation, Nigeria is a land of considerable promise. It is planned to develop cotton growing as an Imperial venture.



Humphrey Joel

THE SPIRES OF CAEN, RIVER PORT AND CHIEF CITY OF THE DEPARTMENT OF CALVADOS

The city of Caen, on the Orne, is situated some nine miles from the spot where the river empties its waters into the English Channel. It has many historical associations, and its connexions with William the Conqueror are still vivid in the two handsome churches founded by that monarch and his wife. The square tower in the foreground belongs to La Trinité, church of the Abbaye-aux-Dames founded by Matilda; in the central distance soar the spires of S. Etienne, church of the Abbaye-aux-Hommes founded by the Conqueror; while the lofty, pierced spire to the left crowns the thirteenth century Gothic tower of S. Pierre.

NORMANDY

Land of Gothic Fanes & Cider Orchards

by Professor Percy Dearmer, D.D.

Author of "Highways and Byways in Normandy"

THE traveller misses Normandy unless he crosses by the longer sea routes. Yet most people who travel in France make the special and often disturbing journey to Dieppe or Havre or Caen first of all, because Normandy is so full of interest and beauty. It is more like England, on a wider scale, than the rest of France, and it is very varied.

The white cliffs and broken coast begin near the popular watering-place of Tréport on the extreme north of the province, and stretch down from one seaside town or village to another as far as Havre, the great port where the Seine is seven miles across. South of the Seine the coast is flat, but with fine country inland, and sprinkled with watering-places of a more fashionable description ; this is the department of Calvados, which spreads out westwards to the Cotentin, a peninsula which is generally missed by the tourist in Normandy, but which contains many buildings of interest and is familiar to sailors at one point—the port of Cherbourg.

Boundaries Marked with the Sword

The west coast of Cotentin is granitic, like that of Brittany. One passes from the chalk cliffs of the north along sandy beaches to the granitic hills which enclose the wonderful bay in the heart of which lies the Mont St. Michel, close to the borders of Brittany. At its stormy mouth are those outposts of England—Jersey, Guernsey, Alderney and Sark, last relics of the days when Normandy was part of England.

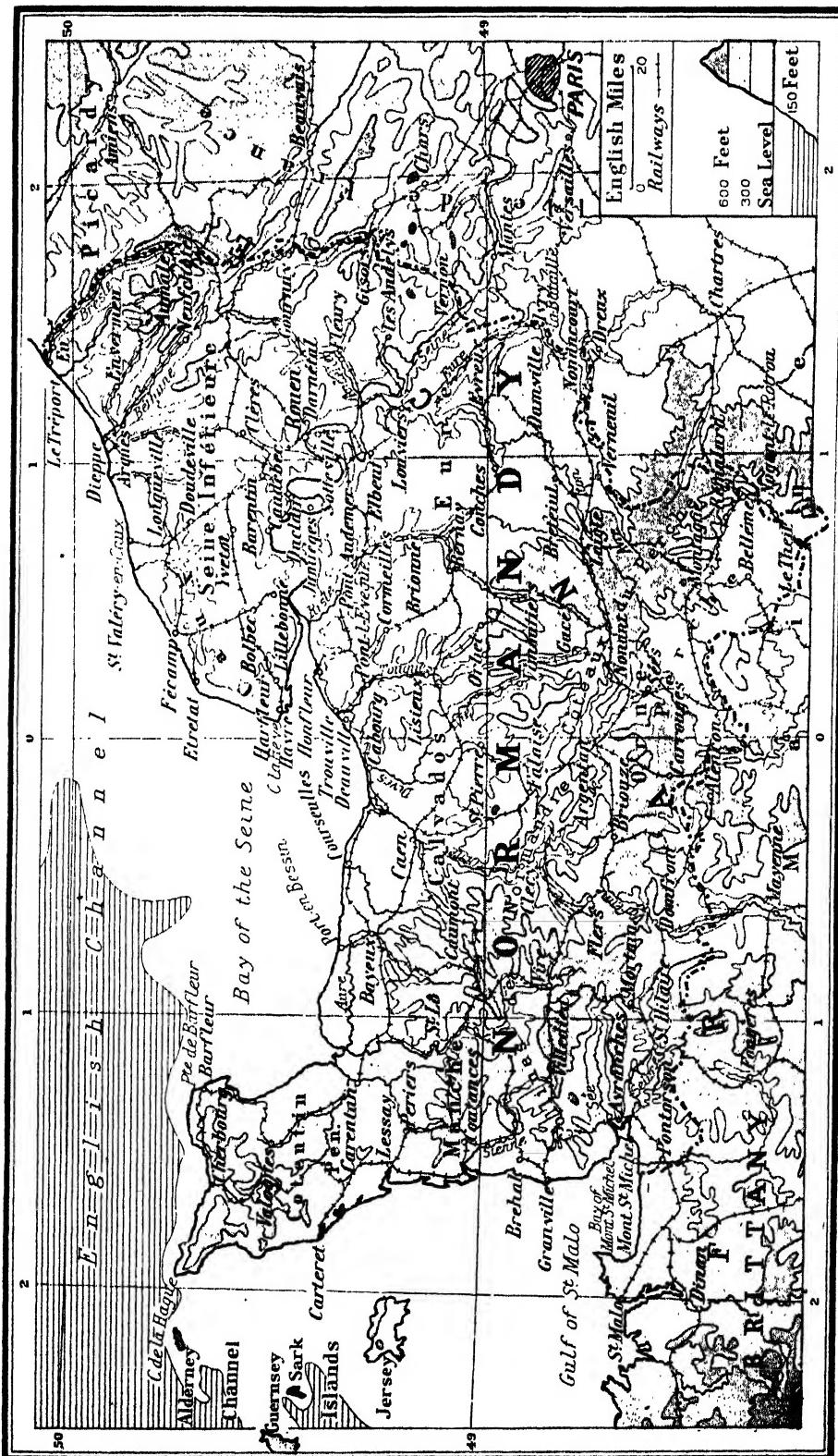
For Normandy was a feudal duchy, the secular aspect of the archbishopric of Rouen, and owed its shape and

extent to the fighting capacity of its dukes, and not to any clearly defined geographical reasons. When, at the Revolution, France was cut up into what seems to us a vast number of confusing and unpicturesque departments, the French were proclaiming in their logical matter-of-fact way that feudalism was over, that there were no provinces, but just one country—France—subdivided prosaically under clumsy titles purely for administrative purposes.

The Ineradicable Normandy

But Normandy persists, and even for Frenchmen there is still such a province, though the law knows it not. And this Normandy stretches inland along the glorious Seine valley, with its chalk cliffs and tree-clad hills, and along the beautiful and remote Collines de Normandie farther south, just as far as the old fighting dukes could push it and their great frontier castles could hold it. The kings of France—for it was once only a very small part of France that the kings ruled—held them back from Paris and the Ile de France ; and they kept back the kings of France by fortresses like Château Gaillard at Les Andelys and Gisors. When there was a strong king of France like Philippe-Auguste, and a weak duke of Normandy like the English King John, Château Gaillard fell, and the frontier was broken down and Normandy lost.

So it is that the internal borders of Normandy are vague and difficult to remember. They do not even exactly conform to the boundaries of the departments. But for practical purposes one can say that Normandy consists of these five departments : Seine-Inférieure

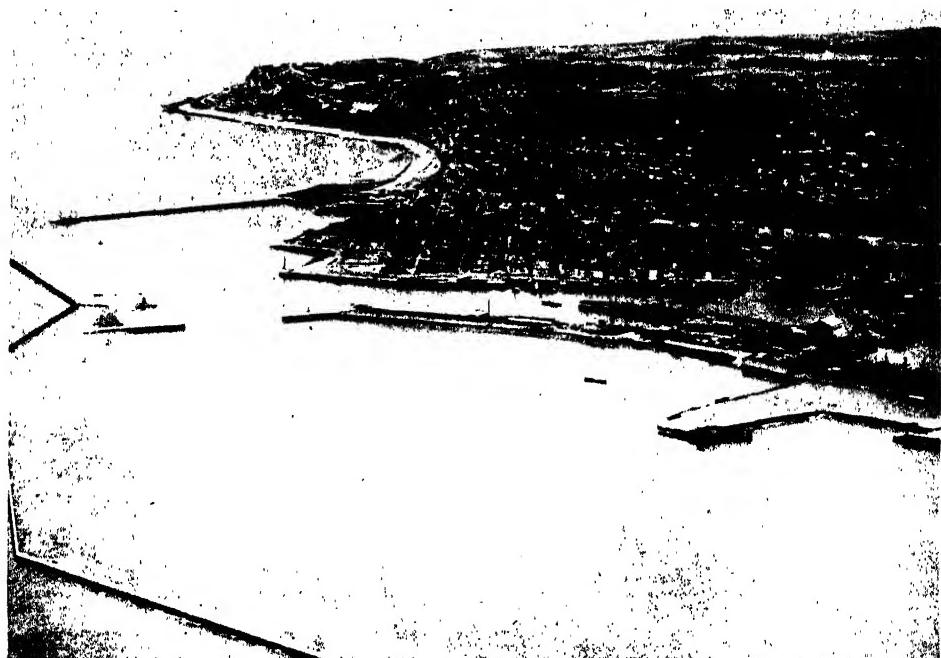


STORIED TOWNS OF NORMANDY CLUSTERING ABOUT THE MOUTH OF THE SEINE

on the north ; Orne, much less known to English folk, on the south ; and Manche (the Cotentin), Calvados and Eure between them. But perhaps we generally think of it as including certain famous places, such as Rouen, Caen, Bayeux, Cherbourg, and excluding certain others, for everybody knows

Normandy owes its special character to the Viking invasions of the ninth century, which left an even deeper mark there than did the Danish invasions of England.

It is not for nothing that the land is called after the North-men. The prevalent type of inhabitant is still of the



Aerofilm

BIRD'S-EYE VIEW OF ONE OF THE GREATEST OF FRENCH SEAPORTS

Lying on the north bank of the Seine estuary, 49 miles west of Rouen, Havre enjoys an extremely advantageous position and ranks next to Marseilles as France's most important seaport. The port has extensive docks, a well-protected outer harbour into which the daily steamer from Southampton comes and many basins—the Bassin de l'Eure accommodates Transatlantic liners

that the greatest Gothic cathedrals of France—Amiens, Beauvais and Chartres—lie beyond Normandy on the east, and that St. Malo, Le Mans and Orleans lie beyond it on the south. These cathedral towns, with Senlis, Soissons, Noyon, Laon and Reims, are indeed to-day best reached from Paris, or on the way to it, while Brittany and Normandy form distinct touring grounds.

Apart from its local configuration—its varied sea coast, its rivers, hills and meadows, with the stately lower reaches of the Seine dividing it into two parts, and its abundant cornfields, rich pasture-lands and orchards of cider-apples—

large, fair-haired, quiet-mannered type, which is so little like the French of the midlands or the south.

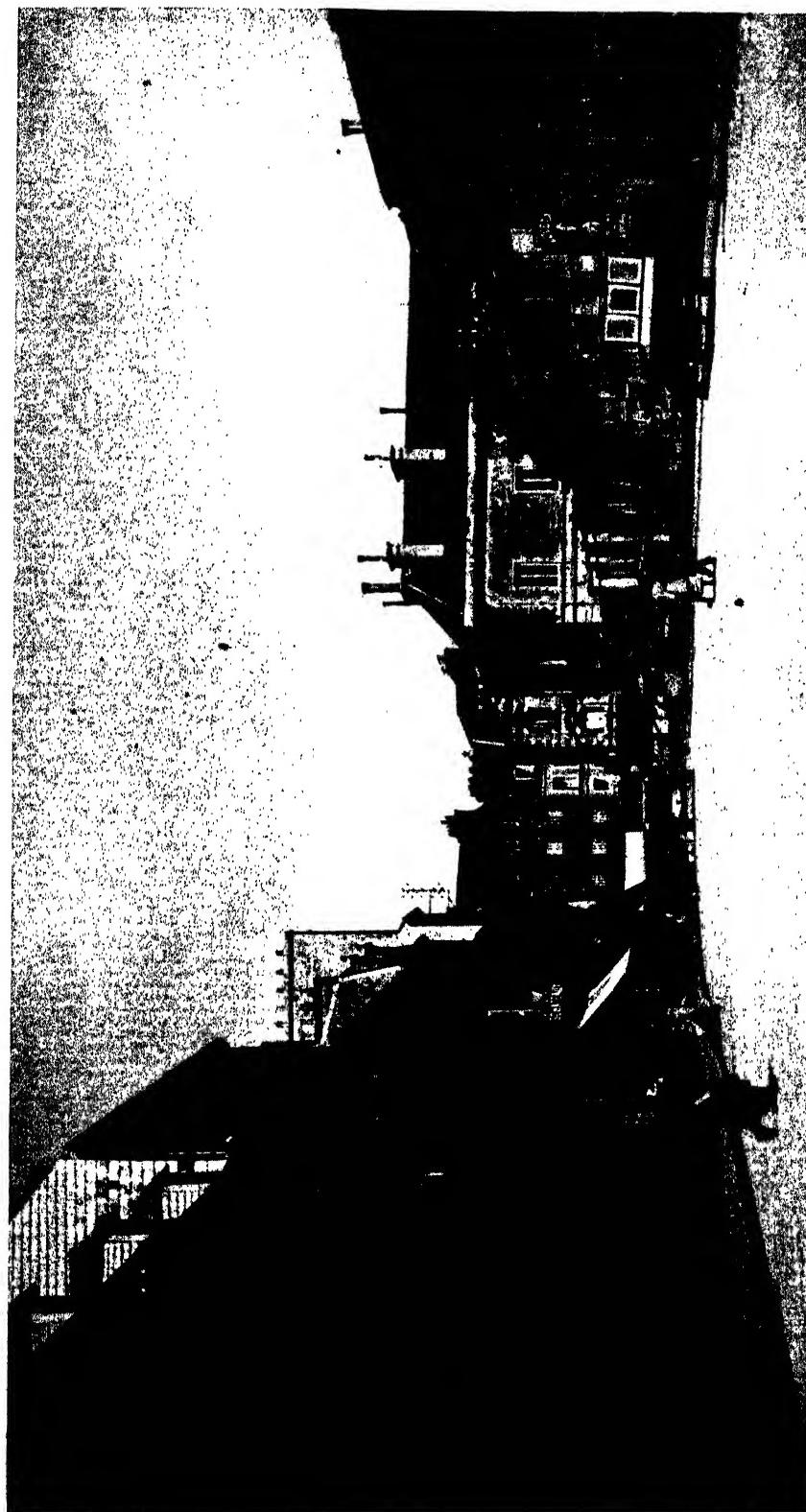
Normandy once consisted of several Gaulish tribes and was ultimately a Roman province—indeed Roman names abound disguised in French corruptions, as Eu (Augusta) on the extreme north, Coutances (Constantia) in Manche, or Lillebonne (Juliabona), the relic of an important town with an amphitheatre near Havre. But the name of Havre itself (The Haven), like that of Dieppe (The Deeps), or Caudébec (The Cold Bock), reminds us of another race, a people who were primarily interested in the sea and seaports.



B. N. A.

VIEW OF PICTURESQUE AVRANCHES, ONE OF THE OLDEST TOWNS IN NORMANDY

Avranches dates from Roman times and occupies a fine site on a hill rising on the left bank of the Seine in the department of Manche, while situated on the coast road from St Malo to Granville it commands a delightful view of Mont St. Michel and its beautiful bay. Three churches and a town-hall are among its most interesting buildings, and historical interest centres in the inscribed stone in the square which indicates the spot where in 1172 Henry II. of England did penance for the murder of Thomas Becket. Avranches has experienced several sieges, and suffered at the hands of the Huguenots and in the peasant revolt of 1639



E. A. WATMARK

NAVY

STREET IN CHERBOURG, SEAPORT OF FRANCE AND STRONGLY FORTIFIED STATION OF THE FRENCH NAVY
Cherbourg, in the department of Manche, enjoys a fine situation at the northern extremity of the Cotentin peninsula on the English Channel, some 70 miles distant from the coast of England. The town, though well built, clean and with many modern buildings, holds but few interests for the traveller, and owes its importance to its naval harbour, which consists of several basins and is excellently equipped with docks, dry docks, warehouses, workshops and barracks; the whole being defended by fortifications. Most of the agricultural produce of Normandy is exported from Cherbourg, and the chief industries include saw-milling and rope and leather making.



Special Press

UPPER GRANVILLE ON ITS HIGH ROCK ABOVE THE ENGLISH CHANNEL

The old fortified seaport of Granville is in the department of Manche, and consists of the lower and upper towns; the latter, containing the citadel, is surrounded by fortifications and built on a steep bluff protruding into the sea. Below the rock, on the opposite side from the harbour, the long, white building of the Casino lies near a sandy beach with excellent bathing facilities.

Upon this fair country, which had had a bishop at Rouen as early as the third century and had been conquered by King Clovis early in the sixth, there descended, in the ninth, the terrible Northman or Norman pirates by the easy water-way of the Seine. But these Vikings had a curious capacity for being converted when their first fury was over and for assimilating themselves to the vanquished. The usual thing happened in Normandy. Rollo became a Christian according to his lights, and in 911 made a treaty with King Charles the Simple of France, by which he became a more or less civilized duke, with Rouen as his chief city.

The ferocious Viking Northmen did not conceal their contempt for the degenerate descendants of Charlemagne. They knew that the province was ceded

to them by King Charles only because they had already conquered it, and they mocked at the one condition which they had accepted—the oath of feudal homage. So, when Rollo came to perform the ceremony of kissing the foot of his feudal superior, he delegated the office to one of his knights; and this knight, says an ancient chronicle, “immediately seizing the king’s foot, lifted it up to his mouth, and kissed it as he stood erect, and the king fell supine.” The cheerful pirates shouted with laughter, but the French did not dare show any signs of resentment.

By the next generation, however, the barbarians had settled down among the survivors of the original inhabitants, had adopted their language and become the champions of orderly government and great supporters of the church.

Like the other barbarians who had been devastating Europe for the past five centuries, they adopted also the culture and the arts of the country where they settled. They covered the land with buildings both ecclesiastical and secular, and they built thoroughly, not leaving their work half completed, as was the habit of the southern races of France. But they did not become proficient in the other arts; in their scanty conventional sculpture, for instance, figure-work is generally absent, and when it occurs is merely barbarous.

A typical instance of the ruin which the Normans made and repaired was the Abbey of Jumièges. It is now once more a ruin, for the abbey was

destroyed by the inhabitants themselves and used as a quarry during the early part of the nineteenth century, after its suppression in 1793. But before the Northmen came, it had been a large community containing, it is said, nine hundred monks. Duke Rollo's son, William Longsword, found the number reduced to two; and at the request of these miserable survivors, set about rebuilding the monastery, where to-day the oldest remaining fragment still bears testimony to his good offices.

Thenceforward Jumièges became a great spiritual centre for the Normans and it was Robert, Abbot of Jumièges, who formed part of that peaceful conquest of England that was taking



Humphrey Joel

UNDER AN ARCHWAY OF MONT ST. MICHEL'S AGE-OLD ABBEY

Mont St. Michel is world-famed for its picturesque beauty. Clinging to a granite rock rising steeply to 160 feet above the sands in the blue bay of St. Michel (see page 2992), the small village is connected with the mainland by a raised causeway. The rock is crowned by a Benedictine Abbey, founded in 708, once a noted centre of learning and place of pilgrimage.

place before William the Conqueror invaded its shores. Robert was made Archbishop of Canterbury by King Edward the Confessor; but the people of London, furious against the foreigners with whom the king surrounded himself, drove Robert out, and he returned to Jumièges.

Restoration of Decayed Abbeys

The Normans after their conversion were indeed great supporters of the monasteries, whose civilizing influence was needed at a time when France, like England, was backward enough, and Normandy the most backward part of France.

Foreigners were invited to come over and restore decayed abbeys, as was William the Lombard, who came to Fécamp, and was also put in charge of the ancient monastery at Mont St. Michel. More famous were Lanfranc from Pavia and Anselm from Aosta in Piedmont, who were both friars of the great monastery at Bec, though there is little left now to see there, and both became Archbishops of Canterbury. They also were both contemporaries of William the Conqueror; and it was William who was present when the great new abbey church at Jumièges, which still survives in parts, was consecrated in 1065, the year before the battle of Hastings.

Birthplace of William the Conqueror

No doubt it is William the Conqueror who has left the deepest impression on Normandy, at all events to English minds, especially in the picturesque town of Falaise, where he was born, a bastard son of Robert the Devil; at Bayeux, where the famous tapestry depicts his conquest of England; at Caen where he was buried, and where stand those two great monuments of Norman architecture, the Abbaye-aux-Hommes and the Abbaye-aux-Dames. The Conqueror and his queen, Matilda of Flanders, built them because they had married within the forbidden though remote limits of consanguinity approved of by the contemporary Pope.

Normandy is indeed notable to the student of architecture for its many churches and castles in that branch of Romanesque which, in Normandy and England, we call Norman, especially the castles of Arques, Les Andelys, Gisors, and the churches at Bernay, Domfront, and Caudebec and the chapel of Mont St. Michel, the most perfect example of them all.

The Norman architecture of Normandy is less varied than that of England, but it is earlier, and has a sturdy, ponderous simplicity which is characteristic of the rough fighting-men who built it. Still finer are the examples of that later architecture, the beginning, culmination and flamboyant end of Gothic, in the invention of which France took the lead. In France, Gothic architecture is not divided as in England into Early Geometrical and Flowing Decorated and Perpendicular, but into three clearly marked styles, separated by an almost complete gap in the fourteenth century, when there was no chance for building during the miseries of the Hundred Years' War with England.

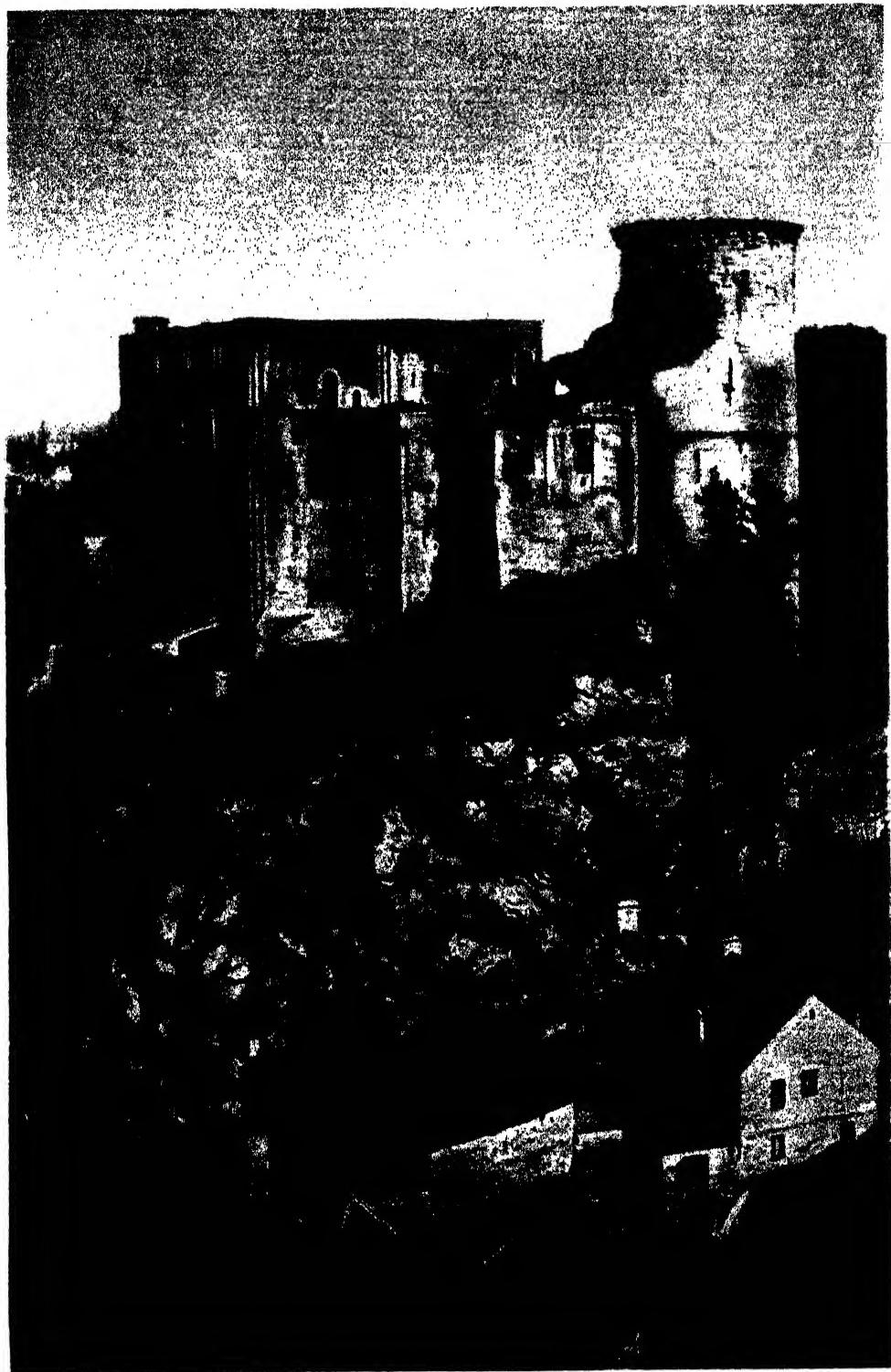
Examples of Norman Gothic

The first style, the Transitional, is more markedly Gothic than the slower transition from Romanesque in England: it is nobly illustrated in Bayeux cathedral, S. Pierre at Lisieux, S. Evrout at Mortain, and Fécamp. This style and the next, the complete Gothic, have definite Normandy characteristics in this part of France, and indeed have often more kinship with English than other French architecture. There are fine examples of the pure, developed Gothic—the famous Thirteenth Century Gothic of France—at Evreux and Coutances cathedrals, at Louviers, S. Pierre at Caen, and Eu. Normandy also possesses one rare and splendid example of the melancholy fourteenth century in S. Ouen at Rouen, which was built during the English occupation. Rouen indeed reminds us how the English first lost Normandy, with much else, and then held it again till Joan of Arc drove out



Donald McLeish

NORMANDY. *Over the roofs of the houses by the market-place rises the incongruous iron spire of Rouen's wonderful cathedral*



NORMANDY. *From Falaise castle Robert the Devil spied Arletta, the tanner's daughter, by whom he begot William the Conqueror*



F. N. A.

NORMANDY. These timbered houses, scarred and battered by the passing years, are by the Pont de Caen in Caudrebec-en-Caux

Captioned
by
J. M. G.

NORMANDY. Rising out of the sea-bed, the Benedictine abbey upon the granite rock of Mont St. Michel appears to be some fairy fantasy built in the world of reality by the raised canopy



the invaders, only to die a martyr for her country in the market place of Rouen in 1431.

The Tour Jeanne D'Arc, where she was interrogated, still stands : she was killed by French even more than by English hands, for indeed there was no France as yet—nationalism had not yet arisen to weld Burgundy, Normandy and Brittany into one France, and to make it unthinkable that a Bishop of Beauvais should again combine with Burgundy

examples of this than are to be found in the charming little riverside town of Caudebec, at Saint-Lô, Arques and the church of S. Maclou at Rouen. In Rouen also is the splendid if over-elaborate Palais de Justice ; the magnificent cathedral also owes part of its glory to Flamboyant architecture, though the main part of it belongs to the twelfth and thirteenth centuries, and the lofty iron spire was built after the Franco-Prussian War.



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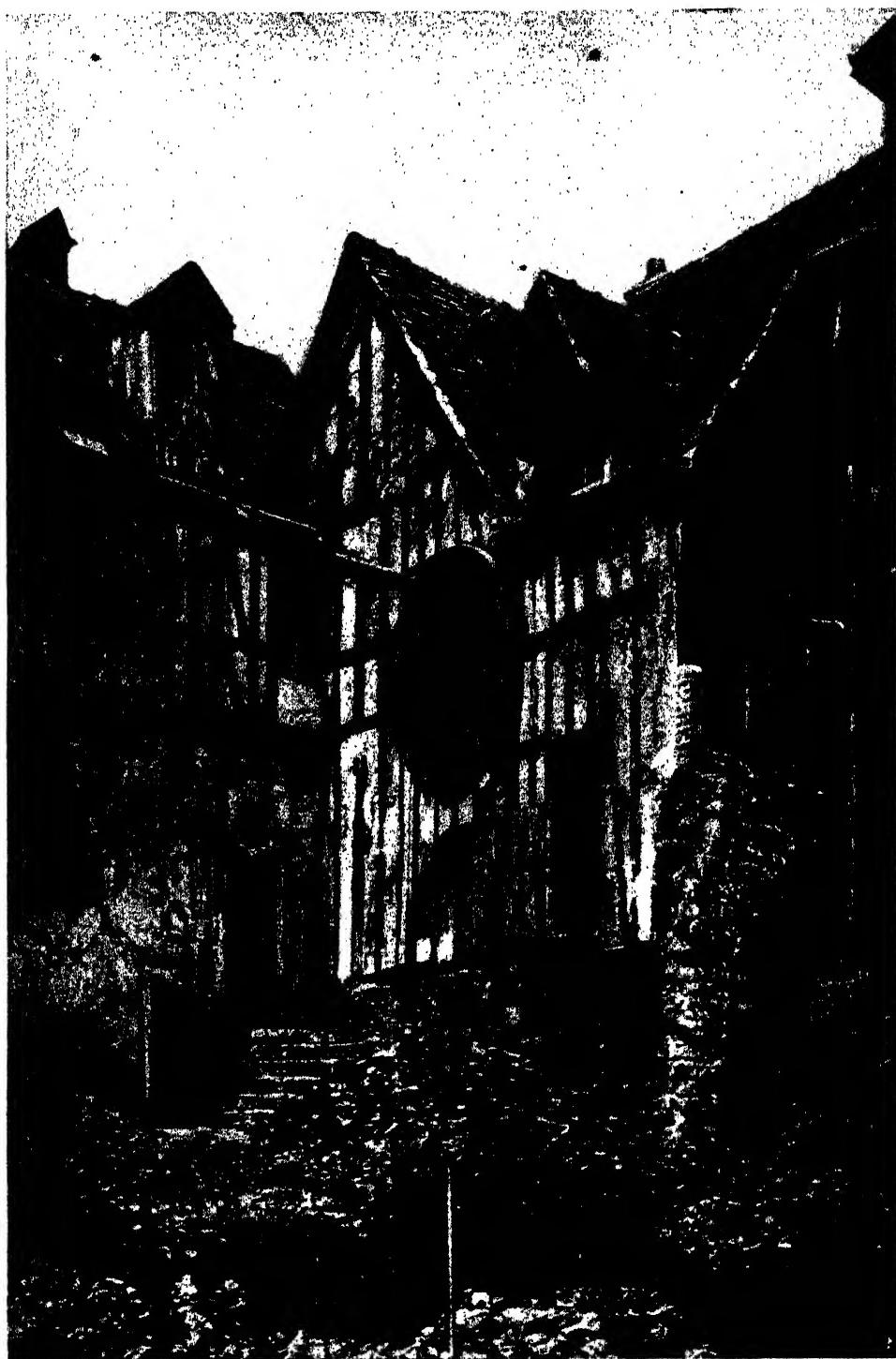
AERIAL VIEW OF THE ANCIENT CAPITAL OF NORMANDY

Formerly the capital of Normandy, now that of the department of Seine-Inférieure, Rouen stands on the Seine, 54 miles by rail east of Havre. The right bank, where lies the main part of the city, has excellent quays, the total tonnage entered and cleared here in 1923 being over 4,000,000. The central structure is Rouen's proud minster, one of the finest Gothic buildings in Normandy

and the University of Paris to kill a saviour of France. England had been the first part of Europe to become a nation in the modern sense ; and it is in some part due to Joan of Arc that France was the next country to grow out of feudalism into nationhood.

When France had recovered in the fifteenth century, she developed a beautiful but unstable architecture of her own, based upon the Flowing Decorated of England, which is aptly called Flamboyant. There are no more delightful

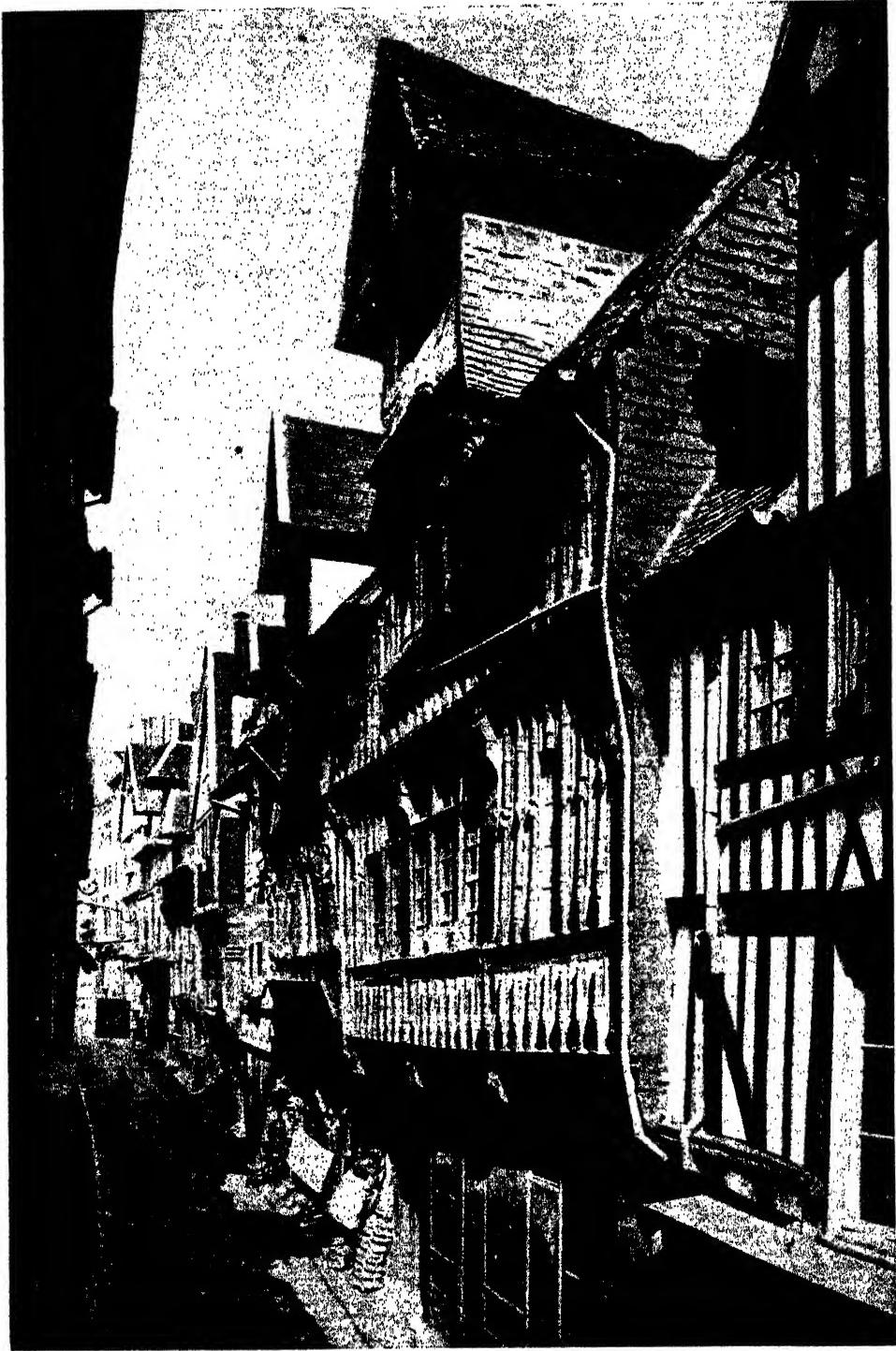
Normandy also possesses many examples of the quaint Early French Renaissance in many old merchants' houses, and in the later additions to churches like those at Evreux and Gisors, and in S. Jacques at Lisieux and S. Remi at Dieppe. The granite churches of south Normandy, such as Granville and Vire, have a remarkable character of their own, and owe part of their peculiar grandeur to the hard stone of the district. Mont St. Michel, abbey and fortress combined, a grand pile of scientific and



OLD BUILDING OF ROUEN RIFE WITH MELLOW MEMORIES

Humphrey Joel

The beautiful city of Rouen contains many architectural treasures of the Middle Ages, although modern construction is responsible for several spacious streets in the city's older quarters, which, however, do not detract from the general picturesque aspect. In this small house, behind Rouen cathedral, Joan of Arc is said to have lived pending the trial which resulted in her fiery martyrdom.



E. N. A.

CARVED AND GABLED BEAUTY OF MEDIEVAL LISIEUX

Lisieux, an interesting town of Normandy, lies in the department of Calvados some 40 miles from Rouen. Much of it came into existence during the twelfth and thirteenth centuries, and many streets still treasure their quaint medieval structures. Here, on the right of the Rue aux Fèvres, facing some half-timbered dwellings, is the House of François Premier, or the Manoir de la Salamandre



Humphrey Joel

CHURCH AND CLOISTERS WHICH ROSE AT THE BIDDING OF WILLIAM I.

These beautiful towers surmount the west façade of S. Etienne, church of the Abbaye-aux-Hommes at Caen. Founded by William I. in 1066, at the same time that the church of the Abbaye-aux-Dames was founded by his wife Matilda, it is distinguished by its simplicity and contains the tomb where once the body of the Conqueror rested. The Lycée Malherbe now occupies the Abbaye-aux-Hommes



Humphrey Joel

AN OLD CURIOSITY SHOP THAT SLUMBERS IN FALAISE

It was in Falaise that Robert le Diable had his castle and from one of the windows saw, as in the story of David and Bathsheba, a fair maid washing. She was one Arletta, daughter to a tanner of the town, and subsequently bore him a son who was to become famous as William the Conqueror.

Old Falaise is essentially a place of the past like the goods in this aged shop

beautiful building on its rocky island, soars out of the bay where the tide rushes over an area of a hundred and eighty square miles and rises to a height of forty-eight feet. "St. Michel au peril de la mer" has been not unjustly called one of the wonders of the world.

Normandy is also rich in picturesque "châteaux" and old farm houses. Although it possesses few picture galleries, it has a few museums of great interest, notably at Rouen. Its churches possess a very large amount of stained glass, as at Evreux, and especially of the late glass which was made in the sixteenth century, as at Conches, Caudebec, Pont-Audemer and Rouen.

There is very little of this Renaissance glass in England, and it is generally overlooked by specialists on the subject; but it is very charming in its vivid, pictorial way, and we must remember that glass painting took the place of fresco after the twelfth century in the north and west of Europe.

Rouen, now a great manufacturing town stretching round such of the old city as has not been destroyed by restoration and the ugly new streets of the nineteenth century, is itself an epitome of French history. It was first the centre of the early missionaries among the wild tribes of Gaul, then a Roman

provincial capital, then a possession of the Carolingian kings, and then the headquarters of the Northmen, being very well situated for them on the river route to Paris. After that it became the capital of the new duchy; then it united with England under the Norman and Angevin kings, then was French again, then an English centre in 1449.

Rouen, with Arques and Ivry, were prominent again in the wars of religion, though Henry of Navarre, in spite of his victories at the two latter places, failed to take the capital. At the Massacre of S. Bartholomew five hundred Protestants were slaughtered in Rouen. Her history in modern times has been merged in that of France, and in 1790 Normandy ceased to have a separate political existence.

The Prussians entered Rouen in 1870; but Normandy escaped molestation during the Great War, when Rouen became the chief base of France's British allies. After 1914 Rouen became almost English again for a while, and it will always be one of the first places on the Continent that English folk visit.

For Normandy is near to the English historically as well as geographically, and dear to them for its kindred people, as well as for its lovely old towns, its noble buildings and romantic coasts.

NORMANDY: GEOGRAPHICAL SUMMARY

Natural Division. Mainly the seaward section of the Paris basin, with structural and other similarities to the south of England. In the west adjoining Brittany the granitic areas are part of the old Armorica. (Cf. Brittany.) East of the Seine is the country of the downs, similar to north-east France, Kent and Sussex.

Climate and Vegetation. Resembling Brittany in its oceanic climate, Normandy is not so rainy nor so warm in winter. (Cf. the Hampshire climate.) The bocage in the west is mixed wood-land and grass-land. (Cf. Devon.) The clay vales further east are arable land with trees in spinneys and along the streams (cf. Oxfordshire), and the downs are bare grass-lands lacking water (cf. Sussex). Normandy is north of the vine area and is in the cider country.

Products. In agriculture more highly organized and developed than Brittany, it markets apples, cider, cattle, butter

and cheese, while it grows some wheat, though less than north-east France. In manufactures not so progressive nor so vigorous as the north-east, it makes cottons, woollens, carpets, velvets among textiles, and mines iron ore.

Outlook. Fundamentally a frontier area, a historic march or margin, in its history Normandy betrays its situation as a region of change—the limit of France was now to the south, now to the north. Geographically, a passage-way in both directions: from the Channel men and goods sought the heart of the Paris basin; from the east come waves of industrialism which spend their force in Normandy ere they break on the dour, granitic, inert and ancient Brittany. Consequently neither farming nor industry definitely gives cohesion to the region, and while historic and racial ties maintain its unity, Normandy will depend more and more upon the central soul of France, Paris.

NORWAY

Wild Grandeur of Fjeld & Fjord

by G. M. Gathorne-Hardy

Author of "The Norse Discoverers of America"

ASUPERFICIAL glance at the map is apt to lead to the conclusion that Norway is an arbitrary subdivision of the Scandinavian peninsula. There is, in fact, no clear-cut line separating Norway from Sweden, nothing analogous to the Pyrenean boundary between France and Spain or the river frontiers which to a large extent define the limits of such a country, say, as Rumania.

Throughout the greater part of the nineteenth century, indeed, this superficial view found a practical expression in the union of the two kingdoms under a common sovereign, but the experiment led only to constant and increasing friction, culminating in the separation of 1905 ; and, as a matter of history, the connexion with a country geographically quite distinct—Denmark—proved far more harmonious and durable. For the fact is that such a cursory glance at the map is more than ordinarily misleading ; apart altogether from political and historical considerations which are in themselves sufficiently formidable obstacles to union between Norway and Sweden, there exists actually a geographical frontier between the two countries all the more impassable because its breadth everywhere is too great to be delineated by a single line on a map.

Habitation Driven to the Coast

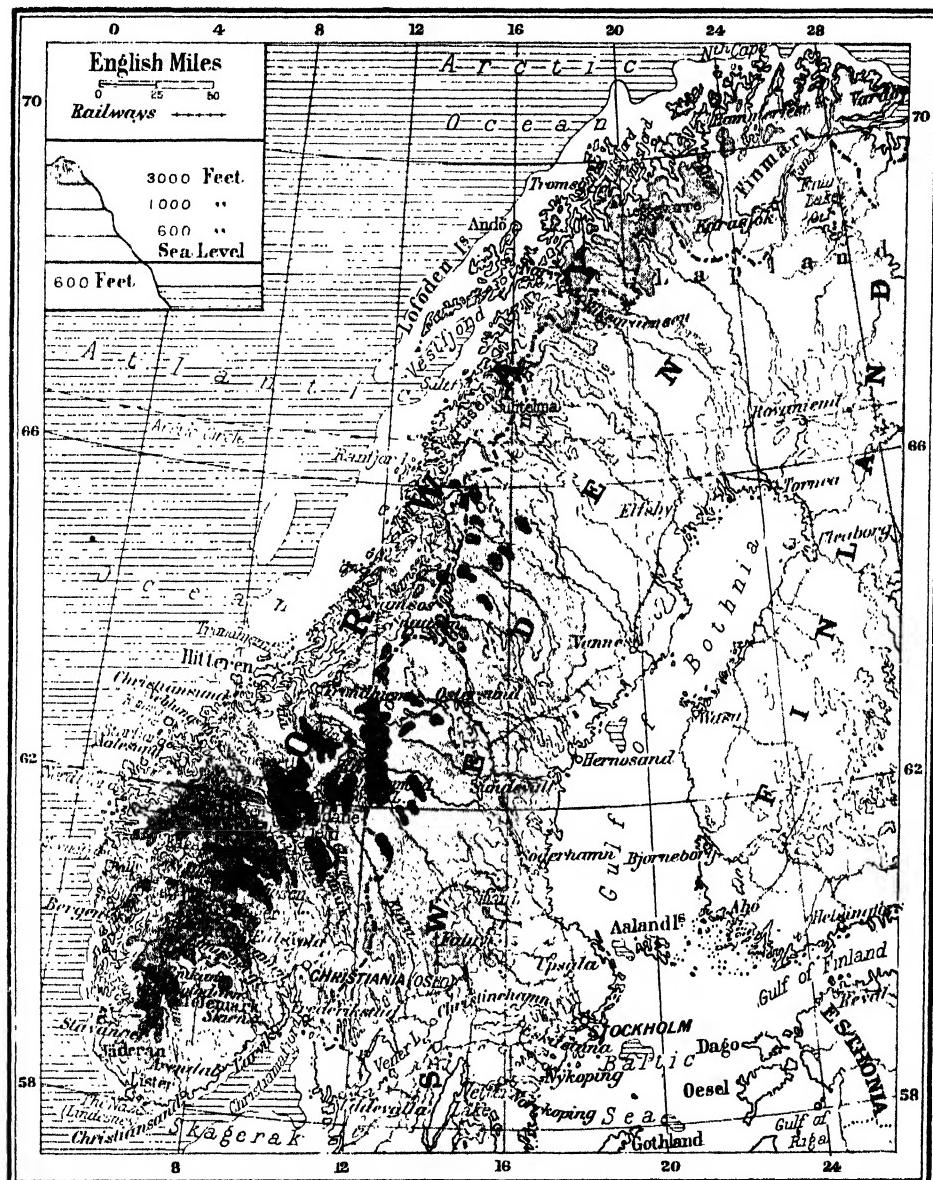
The greater part of Norway consists of an elevated, barren and uninhabited plateau, descending gradually towards the east, while on the west it falls almost precipitously to the sea, so that human habitation is restricted, broadly speaking, to the coast and to the deep, enclosed valleys by which this high

tableland is intersected. This is especially true of the west, but even in the east, where the slopes are more gentle, the inhabited districts tend to follow the courses of numerous rivers, practically none of which cross the frontier, inclining rather to converge on Christianafjord in the neighbourhood of the capital, Christiania, now called Oslo.

Severance from Sweden

Stony "fjeld" or dense forest, therefore, parts the inhabitants of Norway from those of Sweden, and even at the present day there are but few points of communication. The historical development of the two countries has conformed to the geographical conditions ; alike during the early period of independence down to 1319 and during the later union with Denmark from 1397, Norway has looked west across the ocean which was the one common meeting-place for her scattered inhabitants, while Sweden has faced eastwards, towards the landlocked waters of the Baltic and the countries of north-eastern Europe which abut upon its farther shore.

The boundary with Sweden continues from south to north for more than a thousand miles, after which Norway marches with Finland for rather more than half that distance. Otherwise the country is bounded entirely by sea, the Arctic Ocean to the north, the North Sea and the Atlantic on the west and the Skagerrak to the south. The country stretches far into the Arctic zone, beyond the 71st parallel of latitude, but the area lying to the north of Trondhjem is a comparatively narrow coastal strip, the width in some places being no more than ten miles until Finmark in the extreme north is reached.



THE TORTUOUS, SEA-BITTEN COAST-LINE OF NORWAY

South of Trondhjem, the Norwegian territory swells out into a roughly oval form, giving to the map of the whole kingdom something of the appearance of a tadpole with an unusually long tail. In the head, as seems proper, the most advanced development and the bulk of the population are to be found. Yet, for reasons already suggested, the population, as compared with the size of the country, is extremely small. Lofty mountain wastes, and carefully

husbanded forests in the lower regions, restrict the area available for human habitation within comparatively narrow limits even here.

To the north of Röros the plateau begins to fall towards the lower level of Trondelagen, the district bordering on the Trondhjemfjord, which cuts the elevated tableland into two main divisions, the northern and the southern. This dip in the chain contains an important forest area, while it also

provides one of the few convenient routes over the border into Sweden.

The mountain system of Norway is therefore divided into two halves, which may be considered separately. The northern division is more of a range and less of a plateau than the southern; the greatest heights follow for the most part the line of the Swedish frontier, forming a chain to which the name Kjölen (the Keel) is more or less appropriate. Yet high fjeld, here as in the south, extends in most places to the western coast, and one of the largest continuous glacier fields in Norway, Svartisen, occupying an area of more than 200 square miles, lies between the Saltfjord and the Ranfjord about the Arctic circle. Similarly, the highest point in northern Norway, Jaeggevarre (6,283 feet), stands on a peninsula between the Lyngsfjord and the Ullsfjord.

The fjeld to the south of the Tröndelagen depression may be divided into

several mountain groups. On the northeast side of Gudbrandsdalen are the Dovrefjeld and the Rondanebjeld, the highest points of each respectively being Snæhaetta (7,550 feet) and Rundvashögda (6,890 feet); but the highest peaks in Norway are to be found on the other side of Gudbrandsdalen, in the area bounded on the north by the Nordfjord and the river Otta and on the south by the Sognefjord and the river Vinstra.

Between the two fjords is the Jostedals Brae, whose perpetual snow-field and glacier is the largest in Europe, while between the rivers lies Jotunfjeld, with two peaks, Glittertind and Galdhöpiggen, over 8,000 feet in height. Here, too, are the well-known Skagastolstinderne, the highest of which exceeds 7,900 feet. Still farther south, to the east of the Hardangerfjord, lies another great ice-cap, the Folgefonna, and farther inland the wide plateau of the Hardanger



S. J. Beckett

LADDERS FOR CATCHING SALMON AT BALHOLM ON SOGNEFJORD

Balholm is magnificently situated on the Sognefjord to the south of the mouth of the Essefjord. The fjords are well-known for the salmon fishing which is to be had in their waters. The local fishermen mount the somewhat unstable-looking ladders and cast their nets from the small platform at the top. In the grandeur of its mountains and glaciers the Sognefjord rivals the Hardanger



ENTRANCE TO TRONDHJEM HARBOUR AND THE SPIRE OF THE CATHEDRAL ON THE RIGHT

Trondhjem is situated at the mouth of the river Nid on Trondhjemfjord. Owing to the fact that many of the houses are of timber and there have been several disastrous fires, the streets are wide, 100-120 feet, and generally intersect at right angles. The cathedral stands at the end of Munike Gaten and is the most imposing church in Norway. It was founded in the eleventh century by King Olaf Kyrre and has a Gothic nave and choir with a Romanesque transept. Since 1818 the cathedral has been the place of coronation of the kings of Norway. It was restored in 1901.

S. J. Beckett



VEBLUNGSNAES BETWEEN THE WATERS OF THE FJORD AND THE FLANKS OF THE MOUNTAINS

Just south of the junction of the Romsdal and the Romsdalsfjord is the little village of Veblungsnæs which has been built right on the margin of the fjord. The Romsdal or valley of the river Rauma is one of the most famous in Norway. The road ascends the right bank of the river up the lovely valley planted with alders, birches and ashes, and flanked with high mountains. On the west side of the valley rise the Witch-Pinnacles or Troldtindar, 6,000 feet in height. At Horgheim the valley broadens out, the floor becomes marshy and the slopes are strewn with the remains of avalanches.

S. J. Beckett

Vidda. It has been reckoned that over 2,000 square miles of the country are covered with perpetual snow and ice.

This, however, is but an insignificant remnant of the "inland ice" with which Norway in a prehistoric era must have been covered. For practically all the characteristic physical features of the country are due to the action of ice. Glaciers which melted and disappeared countless ages ago carved and moulded the rocky surface into the Norway of history and of the present day. The coast, for example; if nature has been stinting in her provision of habitable territory in the interior, she has been correspondingly lavish here.

Enormous Length of Coast-line

Along a coast measuring but some 2,000 miles if indentations are ignored, inlets so numerous and deep have been cut into the land that the actual shoreline, straightened out, would reach half-way round the world. Many of these fjords are so long and narrow as to resemble, with their tributary branches, great rivers rather than inlets of the sea.

The longest, Sognefjord, is more than 100 miles in length. The important Trondhjemfjord is about 80, though its breadth and the lowness of the surrounding country make it inferior to many shorter fjords in grandeur and picturesqueness. For these qualities the Hardangerfjord, about 70 miles long, is perhaps the most celebrated, though it has formidable rivals in Storfjord and Nordfjord, and even the mere 30 miles of the Tingvold or Sundalsfjord brings the traveller into scenery not easily surpassed.

Where the Sea Ploughs Deep

For the characteristic of all these western fjords is that they have been ploughed deep into the very heart of the mountainous plateau, so that the rock wall rises sheer from sea-level to snow-line, giving an impression of stupendous height which the loftier peaks of other countries may be felt to lack. Observed as they usually are

from points which in themselves are of considerable altitude.

As the coast is approached from the interior, the same agency which created the fjords is found to have cut such a network of channels that islands have been separated from the mainland and from one another. Practically the whole of the coast-line, from Stavanger northwards, is sheltered by an archipelago of this description, known as the Skjaergaard.

It would often be impossible for a stranger, cruising in this region, to observe whether he was between islands or in the mouth of a fjord. In one case, indeed, the name "fjord" is applied to what in strictness should be termed a strait. This is the Vestfjord, which separates the lofty Lofoden islands from the mainland. The majority of the rocks and islands of the Skjaergaard are small, though especially in the north some attain to a considerable size. Off the coast to the south of Trondhjem, Hitteren, noted for its red deer, is the largest with an area of about 218 square miles.

Heritage of the Ice Age

The ice age has also given to the valleys of Norway their typical U form, with more or less vertical sides and flat bottom. The debris carried down by the vanished glaciers has for the most part been transported to a great distance; quantities of such material originally Scandinavian have been found in the plains of Europe, while a large part is at the bottom of the North Sea. But on both sides of Christianiafjord, and still more noticeably in the low-lying districts of Lister and Jäderan in the south, the soil is largely composed of an ancient moraine.

More commonly the deposits of the latest ice age, together with stream-borne alluvium more recent still, after being originally covered by the sea have reappeared, owing to the rising of the land, in the form of flat-topped terraces, generally of unusual fertility. In fact, the ancient shore-line, running some



S. J. Breckoff

GRANDEUR OF A ROCK-HEWN ROAD NEAR THE NORANGSFJORD

The Norangsfjord is an arm of the Jörundfjord which it much resembles in its Alpine beauty, being flanked by imposing mountains, some of which are strikingly bold and jagged and streaked with snow and glaciers near their summits. The photograph eloquently illustrates the difficulties of the roadmaker in Norway, where it is frequently necessary to blast the steep rocks



S. J. Beckett

CARCASSES OF WHALES AT A NORWEGIAN WHALING STATION

The Norwegian waters contain several kinds of finner whales, including the humpback, the white whale and grampus. The principal whaling grounds are now located in the Atlantic; whaling in the waters off the Norwegian coast having been prohibited in 1903 consequent upon the complaint of the fisherfolk that it injured the cod-fisheries. Tønsberg and Larvik are the chief ports



S. J. Beckett

WILD NAERO VALLEY AND THE ZIGZAG ROAD FROM STALHEIM

Stalheim stands on a great cliff which terminates the narrow Naero valley. On the left in the photograph towers the huge sugar-loaf of Jordalsnut and on the right are the precipitous grey cliffs of the Kaldafjeld and Aaxeln. The steep sides of the valley have been deeply scarred by the avalanches which crash down them in the early summer. From the cliff the houses below seem mere toys



S. J. Beckett

AALESUND ON THE TWO ROCKY ISLANDS OF NORVO AND ASPO

Aalesund lies on two small islands on the outer fringe of the Skjaergaard and is the commercial centre of the Storfjord district and of the fisheries of the western "banks." The two parts of the town are connected by a bridge and since the fire in 1904, which destroyed practically every building, the whole town has been rebuilt in brick and stone—a very uncommon thing in Norway.



S. J. Beckett

FACING THE FROZEN MAJESTY OF A NORWEGIAN ICE-FIELD

Jostedalsbreen, lying north of Sognefjord, is a great snow-field, the summit of which is about 6,795 feet. Its vast ice-cap, the largest glacier in Europe, covers an area of 330 square miles and from it many glaciers descend to within 150 to 200 feet of sea-level. One of them, the Kjendalsbreen, is seen above with the glacier stream emerging from a magnificent vault of ice.

650 feet above the present sea-level, includes a large proportion of the cultivable area of the country.

The lower parts of the western valleys are therefore extensions of the fjords from which the sea has receded. The scenery, accordingly, has the same grand characteristics ; only the floor has changed from water to land. Down the centre, however, run fine, swirling rivers with deep pools and rocky rapids, to the banks of which Englishmen have long since made a habit of resorting in summer for the salmon-fishing.

Waterfalls a National Trust

In length, naturally, the western rivers cannot compare with those lying on the opposite side of the main watershed, but they make up for this in picturesqueness and sporting qualities. This part of the country is also rich in beautiful waterfalls, at least one of which, the Skjeggedalsfos in the Hardanger district, has been permanently preserved by the Norwegian Tourist Association from profanation by industrial development.

The longest river of the west is the well-known Namsen, which measures nearly 120 miles. Salmon-fishing, however, stops about 40 miles from the mouth, below the wide and beautiful Fiskemfoss, which the fish are unable to pass. In the extreme north are two considerable rivers, the Tana (186 miles), which for the greater part of its length forms the frontier with Finland, and the Alten (110 miles).

Salmon-fishing on the Rivers

In the region which lies between these rivers and the Namsen, the Vefsna is the most celebrated salmon river. In the Trondhjem area, the Gula and Orkla are the most important. South of this it would perhaps be invidious to discriminate between the many streams which have endeared themselves to the fisherman.

But the largest rivers in Norway are those of the south-eastern basin, which empty themselves into Christ-

ianafjord. Chief of these is the Glommen, which rises near Röros and debouches at Frederikstad after a course of nearly 400 miles. The railway from Trondhjem southwards, after ascending Guldalen, follows the line of this river closely throughout the greater part of the route.

Another natural highway is formed by its tributary, the Laagen, called at its point of junction Vormen, which rises in the Lesjeskogens Vand in Gudbrandsdalen, and flows thence through the Mjösen lake. This river has the peculiarity that it shares its source with the Rauma, which runs in the opposite direction into the Romsdalsfjord, so that there is really continuous water from sea to sea. The tendency of all the rivers of this system to keep within the Norwegian frontier has already been mentioned ; the only important exception is the Klara, which rises near the boundary in the Faemund lake and deserts the country for Sweden.

Lakes Excavated by the Ice

The whole of Norway, highland and lowland, is plentifully sprinkled with lakes, which account for 3.8 per cent. of the total area. These also are the result of glaciation, most of them having been excavated by the moving ice-cap, while those in the southern lowlands, such as Mjösen, have been dammed by moraine deposits. Most of them are extremely deep.

The emphasis hitherto laid on the part played by ice has perhaps given too cold a tone to the picture. It is true that Norway is an extremely northerly land. The south point is about on a level with Brora in Sutherland, while Christiania (Oslo) lies approximately in the same latitude as Petrograd, the south of Greenland, the north of Labrador and the southern boundary of the Yukon. It might, therefore, be supposed that the country generally would suffer from a somewhat arctic climate.

Yet, owing to the influence of warm Atlantic currents and the breezes which



Donald McLeish

NORWAY. *Grim-looking cliffs affording foothold only to the nimble goats cast a deep shadow across the lonely Naerøffjord*



NORWAY. Water and spume veil the great cliffs of the Geirangerfjord, as the Seven Sisters Falls make the downward plunge



Underwood

NORWAY. Below the Rjukanfoss the spray* forms a rainbow arch of colours between the towering walls of the dim gorge

NORWAY. In the Tromsø district is a colony of mountain Lapps with their herds of reindeer. The Lapp depends almost entirely on these beasts for his food, clothing and domestic implements.





Underwood

NORWAY. *Among the peaks of the wild Hörunger mountains about the hamlet of Turtegrø, glaciers overhang the valley heads*

PALESTINE
W. G. M. T. CO.

PALESTINE. Once the Sea of Galilee was a busy waterway, but now only fisherman and pleasure boats are seen on its waters, which lie nearly seven hundred feet below the level of the Mediterranean.



PALESTINE. In this village of Transjordan the shepherd is leading his mingled flock of sheep and black goats down the shaded street, while a diminutive urchin urges the lagards on from behind
KODAK EXPOSURE





Donald McLeish

PALESTINE. Jezzar Pasha brought columns from the ruins at Caesarea to ornament this mosque which bears his name at Acre

blow over them, the temperature of Norway is remarkably high and still more noticeably even. Naturally, in a country stretching over more than thirteen degrees of latitude—a difference greater than that between Copenhagen and Florence—a generalisation cannot express the whole truth.

There is a difference of about 11° F. in the mean annual temperature of the extreme north and the extreme south along the coast, but elevation and distance from the sea exercise almost more influence than latitude. Thus, Karasjok is nearly 7° F. colder than Vardö, though it lies considerably to the south of the latter spot. The western coast between Lindesnes and Trondhjem enjoys a mean annual temperature of about 45° , or within 5° of that of Paris, but at Röros, which is situated in the interior at a height of rather more than 2,000 feet, it is no more than 31° .

Ice-free Harbours in the North

Contrasts between winter and summer temperatures are most strongly marked in the interior. Indeed along the outer points of the coast in the south-western districts the average winter temperature for the whole day is usually above freezing point. Harbours right up to the Finnish boundary in the far north are free of ice throughout the year, though the inner reaches of many of the fjords are frozen, as the temperature grows rapidly lower after leaving the open sea. The highest recorded temperature at Bergen in summer is about 89° F., the lowest in winter 5° . On the other hand, the variation between winter and summer is much greater in the interior. And the winter is a long one.

The west coast and the inland districts show the same difference of character in respect to rainfall, with which on the higher levels of the plateau snow must be included. The wettest points are within the outer coast-line, but occur where the moisture-laden atmosphere from the sea comes in contact with the mountains. Bergen has a bad reputation, but the worst

spot is rather to the north of it, where the rainfall is probably more than 100 inches annually.

A line joining the heads of the fjords from the Lofoden islands southwards represents roughly the landward limit of an annual fall in excess of 40 inches throughout; between this and the outer coast, from Stad to Stavanger, is a belt where the amount of rain is at least double. On the other hand, over the driest parts of the interior, the Dovrefjeld and Finmark, the rainfall is less than 20 inches, and in places it is as low as 12 inches.

Forestry and Altitude

The natural products of the country are pretty much what might be expected from the conditions described. The chief vegetable wealth of Norway is in timber, pine and spruce, which is marked for cutting in the autumn, felled under careful legal restrictions in the winter and floated down the numerous rivers in the spring. These conifers fill most of the uncleared land up to some 2,500 feet, spruce predominating in the east and pine or Scotch fir in the west.

In the lower levels there is some admixture of deciduous trees, but, except perhaps in the extreme south, these are of little importance, only birch, aspen and rowan being at all prevalent. The birch persists for about another 1,000 feet above the coniferous forest and provides the necessary fuel for the "saeters" or mountain dairies in the upland pastures. Above this again is found scrub of dwarf birch and willow, with juniper bushes, after which the barrens of the high fjeld are reached.

Reindeer's Exiguous Food

Here, except where grass exists too far from fuel to be utilised as saeter pasture, there is little visible vegetation beyond reindeer-moss (a lichen), and the remblomst or mountain ranunculus, but such as it is it is sufficient to nourish wild reindeer in southern Norway, and the tame herds of the Lapps in the



S. J. Beckett
VIEW OF THE BEAUTIFUL HARBOUR OF HAMMERFEST AT THE HEIGHT OF ITS TWO-AND-A-HALF MONTHS' DAY

Hammerfest has the distinction of being the most northerly town in the world. It is situated on the west coast of Kvalø, an island lying off the north-west coast of Norway, where the sun is never below the horizon from May 13 until July 29, or above the horizon from November 18 until January 23. This town of nearly 3,000 inhabitants is almost entirely timber-built and boasts electric light, and its fine harbour, the base of the Spitzbergen and Kara Sea fishing fleets, carries on a busy trade. It exports cod-liver oil, fish, reindeer hides, fox skins and eiderdown, and other necessities of life.



TOWN OF TROMSØ LYING WITHIN THE ARCTIC CIRCLE ON THE ISLAND OF THE SAME NAME

Tromsø is the chief port of northern Norway and the seat of a bishopric. It was raised to the rank of a town in 1791, and is a busy trading place, exporting dried and smoked fish, fur and whale oil, while there is a considerable industry in building boats for the fishing fleets. Taking into consideration its latitude, he Island of Tromsø is not so barren as might be expected, mountain ashes, wild cherry trees and birches growing in many places. The rugged mountains, often capped with snow, and the many islets make the coast scenery very impressive and in some places beautiful.

S. J. Beckett

north. Tame deer have also been introduced into many portions of the southern high fjeld, where they tend to oust their wild brethren from the choicer feeding-grounds.

Woods Rich in Berries

Close coniferous woods do not encourage much minor plant life, but beneath its trees and on the lower slopes of the open hillsides Norway is rich in berries. In the numerous marshes grows the much-prized multebaer or cloudberry, which the natives convert into a preserve, though it is much more palatable when eaten raw. Next to this in importance comes the red tyttebaer, frequently mistranslated cranberry (*Vaccinium vitis idaea*), which is made into a jam to be eaten with meat. Besides these the bilberry and crowberry are ubiquitous, and the wild strawberry may frequently be found in the woods.

Of the wild fauna of the forest, the huge elk is the most important, though red deer exist on some parts of the mainland, as well as on Hitteren and other islands. The elk is well protected by the game laws, which allow but one to be shot annually on each scheduled estate, during a season which has now shrunk to ten days. Beasts of prey include the brown bear, the wolf, the lynx, the glutton or wolverine and the fox, but except the last all are becoming exceedingly rare.

Strange Habits of the Lemming

Fur-bearing animals comprise the arctic fox and the marten. A few beavers still exist in the south, but are strictly preserved and are therefore of no commercial importance. One of the most interesting of Norwegian animals is the lemming, a small vole with a pretty coat of buff, black and chestnut. These animals are seen periodically in countless swarms, after which they disappear almost entirely for a number of years.

Game birds comprise the capercailzie, blackgame, willow-grouse and ptarmigan (*skovrype* and *fjeldrype*),

the woodcock and the hjerpe, though the last-named, if good to eat, scarcely deserves to be included in this category, since its habit is to fly into the nearest tree. The other birds most in evidence are the hooded crow, the magpie, the granskjaere or Siberian jay, and the green woodpecker, with eagles, hawks and owls of various kinds.

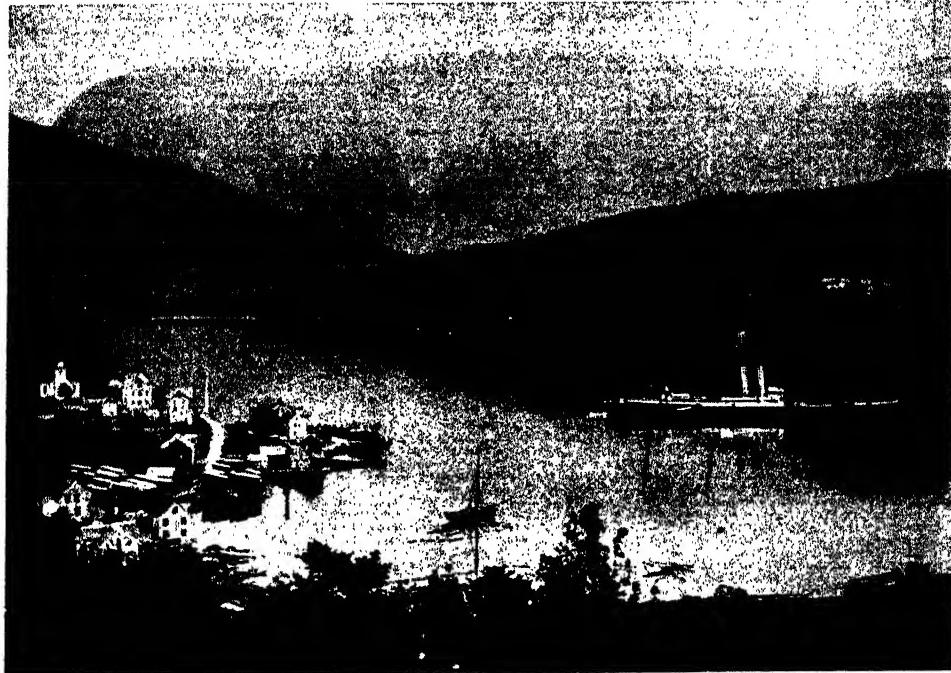
So much emphasis has hitherto been laid on the preponderance of wild nature, that it may be thought that agriculture and farming can play but an insignificant rôle. Judged by the area which it occupies, Norwegian farming seems indeed to be unimportant; even if we include the mountain pastures the land available is but 10.5 per cent. of the whole country. But from another point of view, that of the proportion of the population to which it affords a means of livelihood, farming in its various aspects assumes a very different complexion. Out of a total population of rather more than 2½ millions, nearly a million live by the land.

Numbers of Smallholdings

It must of course be recognized that the average Norwegian farms are of small extent. More than 90 per cent. contain less than 25 acres of cultivable ground, and the farms of 250 acres or more number only 26 in the entire kingdom. The larger farms are all situated in the eastern part of the country, particularly Hedemark.

The grains chiefly cultivated are oats and barley, or a mixture of the two. Rye is also largely grown. The production of wheat is comparatively very small and is mostly confined to favourable districts in the south-east. Barley is grown up to the 70th degree of latitude, and rye nearly as far north, but in these regions the cultivable area is small and confined to the neighbourhood of the coast.

The principal root-crop is potatoes, which can be grown right up to the extreme north. In the south most kinds of outdoor fruit, even apricots, may be grown, and apples, pears and



R. J. Beckett

IN A WONDERLAND OF NATURE AT THE HEAD OF HARDANGERFJORD

One of the loveliest of Norway's lovely fjords is the Hardangerfjord, a deep, many-branched inlet opening south of Bergen and extending in a north-easterly direction to Ulvik. At the head of the placid Ulvikfjord clusters of hamlets and farms collectively known as Ulvik—Braknaes, with its church, being the chief group—are snugly set on the softly undulating slopes of beautifully wooded hills.



S. J. Beckett

THRIVING SEAPORT TOWN ON NORWAY'S SOUTHERN SHORE

Occupying a beautiful position on a square peninsula, Christiansand is one of the largest and most important Norwegian towns on the south coast. It is a port of call for many steamers and its excellent harbour has fine docks and ship-building yards. Largely built of wood the town has suffered repeatedly from destructive fires, and there is a growing tendency to construct in less inflammable material.

cherries will ripen as far north as the 64th parallel. The soil, in spite of its limited extent, is relatively very productive, partly from natural fertility and partly from the intensive cultivation to which sub-division among numerous small proprietors gives rise. The yield per acre is considerably higher than that of most European countries.

Success of Cooperative Farms

Before the Great War nearly 70 per cent. of the cultivated ground was used for the production of hay, but under conditions which stimulated food production more than half of the total area was devoted to corn and roots. This, however, is abnormal. Norwegian farming, in ordinary times, is mainly concerned with livestock and the dairy, the crops being largely utilised as fodder. During the summer the herds are taken to the high tributary valleys, where they are watched and tended from saeters. The establishment of cooperative creameries has been widespread and extremely successful; the same principle has also been to some extent applied to the collection and sale of eggs.

The oldest mining industry in Norway is that connected with iron ore, which can be traced back definitely to 1543. In the seventeenth century there was a great development of ironworks. The geological formations of Norway belong, however, to periods antecedent to the carboniferous, and, except for the island of Andö in the Vesteraalen group where coal has been discovered but not yet properly exploited, the country is entirely destitute of this mineral, and had in former times to depend on wood for smelting.

Water Power for an Old Industry

Consequently most of the old iron-works were closed down during the nineteenth century, though a few continue to produce a considerable output. It is hoped that with the perfecting of the process of electrical smelting, for which the vast water-power of the country renders it particularly suited,

this part of Norway's mineral wealth may see a return to its former importance.

Next in antiquity after the ironworks come the Kongsberg silver-mines, owned and worked by the state. The copper-mines at Röros date from 1644, and since that time there has been a considerable amount of mining, both for the metal and for its pyrites, in various parts of Norway. Sulitelma, on the Swedish frontier, near latitude 67°, is one of the principal copper-mines. Nickel and molybdenite are also found in the country in quantities which make mining operations remunerative under favourable conditions. Apart from metals, there is a considerable export of the granite of which much of the archaean formation of Norway consists.

Wealth that Comes from the Sea

But it is to the coast, where so large a proportion of the population lives, that we must look for the principal sources of wealth. During the Great War Norwegian shipping was of immense assistance to the Allies and realized enormous profits, which have since, however, been lost. But shipping is and will continue to be a cardinal industry, and there are already signs of improvement. Before the War the Norwegian merchant fleet was surpassed only by those of Great Britain, Germany and the United States in net tonnage.

The export of fish is also of the greatest importance. In the early days of prohibition legislation difficulties arose with Spain and Portugal, the chief importing countries, owing to the refusal of their wines; these, were, however, removed by an amendment of the too drastic provisions of the law.

From the interior the forests provide the principal exports, both in the form of timber and of such manufactured commodities as cellulose, pulp, paper and matches. Farming on the other hand, though employing a large proportion of the population, does not produce enough to satisfy the home demand and cannot, therefore, be regarded as of international importance.



S. J. Beckett

UTILISING NORWAY'S NATURAL FORCES TO FEED MODERN SCIENCE

Calcium carbide is made extensively in Norway where water-power is available for generating the electricity required for the furnaces. Much of the charm of Odda, a village beautifully situated at the southern extremity of the Sörfjord, has been marred by the appearance of large factories ; and here a neighbouring waterfall is seen enclosed and harnessed to supply the necessary electric power

The full development and even the appreciation of Norway's industrial potentialities rests with the future. Industrialism in Norway is a very new thing, and its present aspects are not all of them encouraging. It has grown out of, and depends upon, the exploitation of the country's unrivalled

water-power for the generation of electricity. At present the inauguration of power schemes strikes an observer as having progressed too fast, ahead of the industrial purposes for which they may be utilised. The strained finances of the country are at present insufficient to cope with so ambitious a development,



Underwood

VRANGFOS SECTION OF A GIGANTIC STAIRCASE OF CANAL LOCKS

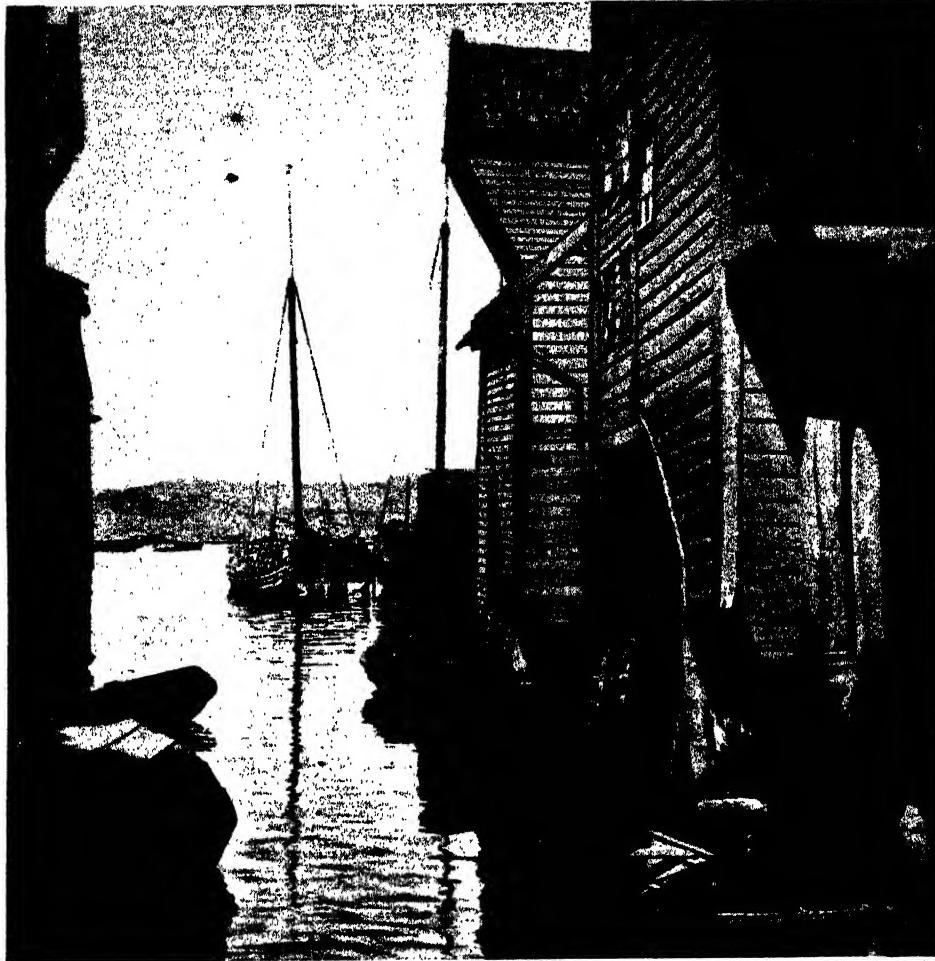
The Bandak-Nordsjö Canal, constructed in 1889-92, follows the course of the Eids-Elv and is about 10 miles in length. A steamer takes nearly three hours to ascend the 17 locks from Ulefos, the lowest, to Hogga, the uppermost lock. Six locks counteract the turbulent rapids of the Vrangfoss, at the top of which is a huge granite dam and a small bridge connecting the banks

while the deliberate policy of the concession laws has been to discourage foreign capital.

But the vast possibilities of all that cheap and inexhaustible electric power involves are undoubtedly present; indeed, what may be described as the export of the power itself, by means of submarine cables, seems already within the ambit of practical politics. And the ease with which the power can be distributed at a distance from its source holds some promise of a manufacturing future which need not be marred by the usual concomitants of such a development—a huddled life in dingy urban

centres. With "white coal," as the water-power is called, there need be no "black country."

Apart from works connected with the treatment of the timber and mineral products of the country, the most important industry at present is perhaps the electro-chemical, especially a process by which nitrates are produced by the use of the nitrogen in the atmosphere. These are of great value both as fertilisers and for the manufacture of explosives: during the Great War it is said that the French once depended for 90 per cent. of their ammunition upon the nitrates of Norway. The centres of



Underwood

HARBOUR AT BERGEN, THE SECOND LARGEST CITY IN NORWAY

Bergen stands on a hilly peninsula in a deep bay. The town has a modern appearance, the quarters adjoining the harbour, which is enclosed by large warehouses, alone retaining something of their medieval aspect. The Gothic Mariæ Kirke was erected in the twelfth century and used by the Hanseatic merchants for over three centuries, while Bergenshus was formerly a royal castle.

the electro-chemical industry, at Rjukan and Notodden in Telemark, are rapidly developing into flourishing towns, and there can be little doubt that the growth of industry in the country will in time considerably modify the usual rule that towns are situated on the sea-coast.

Communication by sea is naturally well maintained, both between points on the coast and with foreign countries, the fast service between Bergen and Newcastle being particularly worthy of mention. Land communications for the most part have developed more slowly, and for long the most ordinary method of getting about the country was

to drive in carioles between post stations (skyds-stationer) arranged along the route. Now, however, the Ford car has invaded most of the principal highways, and the railway system has been considerably extended.

The first railway, Christiania to Eidsvold, was opened in 1854; now the south-east is thoroughly well supplied, and there is a choice of routes from the capital to Trondhjem, following the Glommen and the Gula, or ascending Gudbrandsdalen, and taking the line of the old Dovre road. The Gudbrandsdalen line has also been completed down Romsdalen to the sea. The Bergen

railway, opened to Christiania in 1909, is a remarkable testimony to Norwegian engineering skill.

North of Trondhjem, which is also connected with Sweden via Storlien, the continuous railway route goes no farther than Sunnan, on the shores of the Snaasen Vand, but its completion to Namsos is in progress. In the far north, a line from Sweden traverses the country from Riksgränsen to Narvik, otherwise this region is destitute of rail communication.

Electric traction has been introduced in various places, and owing to the cheapness of electric power in Norway there is much talk of a more or less general substitution of this method for steam. Though lagging behind most countries in railway development, Norway was almost a pioneer in the use of the telephone, which has long been widely used, even in remote districts.

A large proportion of the towns are situated on Christianiafjord, and along the coast between the capital and Christiansand. Christiania, described elsewhere, is by far the largest town; on January 1, 1925, it reverted to its ancient name of Oslo.

Next in importance comes Bergen, which, with its immediate surroundings, accounts for nearly 100,000 of the population. This town, founded about 1070, became of the greatest commercial importance in the fourteenth century, especially under the influence of the

German Hanseatic League. Even at the present day, parts of Bergen have somewhat foreign characteristics, and its dialect differs considerably from that of adjacent districts. But its superb situation is typically Norwegian.

Trondhjem, the ancient capital, with between fifty and sixty thousand inhabitants, boasts a fine old cathedral; Stavanger, a centre of the fish-canning industry, comes next in importance. North of Trondhjem, Tromsö alone has more than 10,000 inhabitants.

Except in the largest towns, the buildings are almost exclusively of wood; indeed, these are everywhere so numerous that destructive fires are very common. For this reason it has become customary in the country districts to separate the houses, rather than to encourage villages. The older farms are decidedly picturesque, with weather-browned timbers and roofs of natural turf resting on a foundation of birch-bark.

Physically and mentally the Norwegians are an extremely fine race, the industry and versatility promoted by the nature of their surroundings rendering them exceptionally desirable as colonists. They emigrate in large numbers, principally to the United States of America, where they unfortunately tend to lose many of their characteristics. But the unspoilt Norwegian commands himself to all, and especially to the Englishman, with whom he has much in common.

NORWAY: GEOGRAPHICAL SUMMARY

Natural Division. Plateau, the roots of ancient mountains, part of the ancient continent of Arctis or Atlantis. (Cf. the Scottish Highlands.) Ice-scored and glaciated with deep narrow glens, some of which contain lakes, while others terminate in fjords. The skerry fence of islands provides thousands of miles of navigable water.

Climate. An ice-free coast, in contrast with the pack-ice, always a barrier, off eastern Greenland. (Cf. Alaska.) Abnormal winter warmth. (Cf. Great Britain.) Sea-warmed temperatures and sea-caused rains, especially on the south-west coast.

Vegetation. Tundra in the north on the fjeld. Coniferous forest on the lower slopes. Summer pastures above the tree-line.

Products. Timber, pulp, etc. Cod from the Lofoden islands. (Cf. the Newfoundland and Grand Banks.) Furs. Cattle and dairy produce. Iron ore, silver, copper. Ships and seamen. Electro-chemical products—e.g., nitrates, from water-power or “white coal.”

Outlook. Limited to a narrow coastal sill, and thus driven to seafaring and emigration, the Norwegian has links of ancient origin with the rest of the world. His semi-monopolies of fish and wooden ships tend to become less valuable, and his supplies of water-power promise developments along lines followed by Switzerland. He depends upon the world's markets and the quantities he can take of the products of other lands.

OXFORD

Its Old Colleges & Famous Streets

by Joseph Wells

Warden of Wadham College, Oxford ; author of "Oxford and its Colleges"

THE traveller approaching Oxford by rail from London, and being yet about a mile from the station, sees the skyline across the meadows break out in towers and spires. But as he runs into the mean station his expectations sink, and as he leaves the station, he feels himself altogether disappointed. For it must be confessed that the Oxford which is beautiful is separated from the station by half a mile of mean streets, and in all this region, though here and there may be seen a picturesque survival, there is nothing of interest except the venerable remains of Oxford Castle.

The Norman Keep however, looks much the same as it must have looked when Queen Matilda escaped from her besiegers across the frozen river, and its position reminds the traveller of the cause of the importance of early Oxford. It was as commanding the ford over a deep river and as controlling the river navigation that in the earlier times Oxford was famous.

Memorial of Vanished Orders

Round the castle clustered the old city, and in its crowded streets there was no room for the new life of student Oxford to develop ; the only exception was the activity of the preaching friars, and in pre-Reformation Oxford both Franciscans and Dominicans had great and glorious churches, of which the very site now is a matter of dispute.

The one memorial of them in Oxford to-day (besides the old names of a few streets) is the mural tablet to Roger Bacon, first and perhaps greatest of Oxford men of science, who died and was buried in Oxford in 1294, Penson's Gardens, however, where the tablet

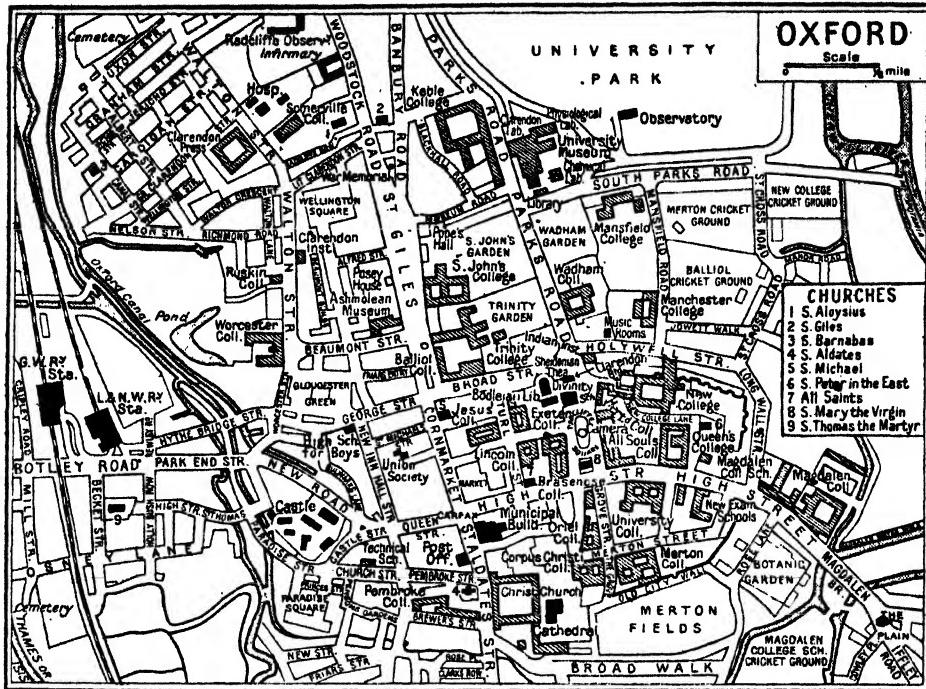
stands, has nothing beautiful about it but its name. Civic Oxford and academic Oxford meet in the centre of the city at the Carfax (the "four ways"), to the north and east of which lie the university buildings. Of these, too, as would naturally be expected from what has been said, the older ones lie on the south side, towards the river, the foundation of Oxford's greatness.

Champion of the "New Learning"

And of these buildings it is natural to mention first Christ Church, for it is almost the nearest college to the station, the starting point of our survey, and, though comparatively young by Oxford standard, it combines in its curiously mixed foundation old and new, ecclesiastical and secular, as was willed by its arbitrary "Founder," King Henry VIII. The largest of Oxford colleges and in many senses the most famous, it offers every kind of interest. In the east end of its cathedral the arches of rude masonry go back to the period long before the Conqueror, when England was still split up among petty states.

The bulk of its cathedral, mainly late Norman, recalls the time when the monastic orders were struggling hard to restore and to maintain learning and morals. The hall is the fitting memorial of the great statesman Wolsey, reformer of all things except his own life, champion of the "New Learning" with which modern Oxford begins. It may truly be claimed that the collection of portraits of Christ Church worthies in the hall illustrates every side of English life, whether in thought or in action.

It is sufficient to mention Penn as an empire builder, Locke as a philosopher, Wesley as a reformer, Mansfield as a



UNIVERSITY CITY THAT USED TO GUARD THE THAMES

lawyer, Wellesley as a governor-general of India, Pusey as a religious leader, Gladstone as a statesman, Lewis Carroll as the creator of "Alice in Wonderland." Nowhere else in England is there such a collection of great men, still living in the work of England's greatest painters, and adorning not a museum but the home where they once lived and formed themselves for life in the great world without.

Finally the buildings of Christ Church are completed by "Tom Tower," the twin masterpiece with S. Paul's Cathedral of England's greatest architect, Wren. But if Christ Church marks the triumph of the college system, the traveller has to follow the line of the river a little farther east to find the earliest example of it.

Merton College is undoubtedly the mother college of all British colleges, for the wisdom of its founder, Walter de Merton, gave it the distinguishing marks of a college—endowments that its sons might live in comfort, independence limited only by its own laws, buildings in which all must live together and share

a common life. And by a happy chance Merton, one of the oldest colleges, has kept more than almost any other foundation its old buildings, its chapel, a fine example of Edwardian Gothic, its "chambers" where students have lived continuously for more than six centuries and its library which is very little younger, the most complete medieval library in England.

It has been pointed out that Christ Church and Merton, two typical colleges, both lie on the south side of Oxford, parallel to its main river; but the river really is nearly a quarter of a mile farther south, for the swampy fields which lie between it and the colleges could not be built on, and Oxford men still have to traverse them in order to reach the river, the contests on which are, and have been for nearly a century, so marked a feature in the Oxford life.

In close neighbourhood to Christ Church and Merton are several other colleges, Pembroke, dear to all who cherish the memory of Dr. Johnson (it has a very fine portrait of him by

Reynolds), Corpus, founded by Bishop Foxe, the friend of Erasmus, and Oriel, still a place of pilgrimage from all over the world for those who have felt the inspiration of Newman and Keble and the other prominent leaders in the "Oxford movement."

Oxford so far has been, for the reasons given above, described in its relation to its river, which the geographers call "Thames" while poets and journalists rejoice in the name of "Isis." But there is another distinguishing feature of Oxford topography, the High Street, once the only important roadway in Oxford, and still forming the main line of communication between the roads from the north and the west and those to London, which cross the Cherwell river at the east end of Oxford.

"The streamlike windings of that glorious street," as Wordsworth, himself a Cambridge man, has so admirably described it, follow the line of higher ground from the Carfax to Magdalen Bridge, where it begins to slope down towards the river; "The High" must be called the determining feature of academic Oxford, as the river is of

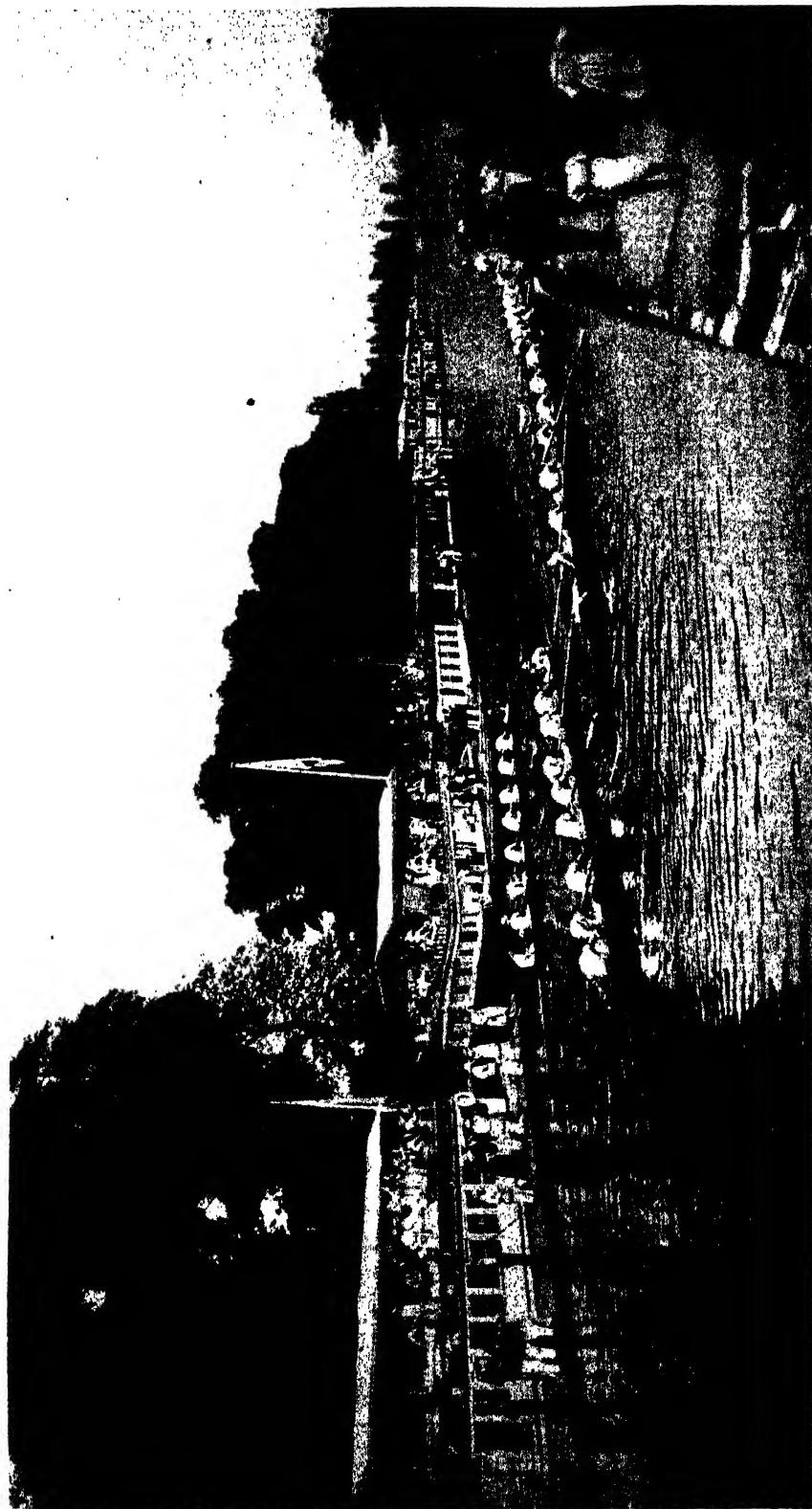
civic Oxford. Half-way down it stands the Church of S. Mary, which has been from time immemorial the centre of university life. Not only have the sermons always been preached there, but the students down to the latter half of the seventeenth century, i.e., till after the Civil Wars, met in S. Mary's for all kinds of secular business, alike grave and festive. It was in S. Mary's that Queen Elizabeth sat for three hours listening to and answering Latin speeches, while the thoughts of many listeners must have travelled back to the scene, only ten years earlier, when Cranmer defied his persecutors from the university pulpit and showed at last the courage of a martyr.

The church itself is mainly a good specimen of the late Perpendicular style, but the spire, much restored as it has been, is a fine example of Edwardian Gothic, and the curious chapel at the north-east corner, at once the first university library and the first special home of university business, dates from the same time. Sermons do not now play the same important part in Oxford which they did in the days of Cranmer, of Laud, of Wesley and of Newman,



CHAPEL OF WADHAM COLLEGE IN ITS CHARMING GARDEN

Founded in 1613 by Nicholas and Dorothy Wadham, Wadham College occupies the site of an Augustinian friary. The buildings are late Gothic and very pleasing, and the chapel, rich in seventeenth century stained glass, contains a Jacobean screen and stall-work. In the garden is part of the great north earthwork raised during the Civil War, when Oxford was the Royalist headquarters.



COLLEGE BARGES LINING THE OXFORDSHIRE BANK OF THE ISIS DURING EIGHTS WEEK, OXFORD'S MAY CARNIVAL

The famous bumping races of Oxford take place in February and May; those in February being of the junior crews, the Torpids, those in May of the senior crews, or Eights. The latter are Oxford's great yearly event, for Eights Week, with Commemoration Week soon afterwards, brings visitors to the town in their hundreds. The mooring-place of the college barges—the college barge or house-boat is to the river what the pavilion is to the cricket field—is on the Isis, or Upper Thames, east of Folly Bridge, facing the towing-path on the Berkshire bank.

Frith



HIGH STREET IN OXFORD, THE "MOSTE FAMOUS UNIVERSITIE AND SEATE OF HIGH RENOWNE"

Oxford, the capital of a flourishing county of the same name, and the cathedral city of an important diocese, is perhaps best known to the outside world as the seat of one of England's two ancient universities. The venerable town, "gorgeous with high-built colleges," has varied and manifold attractions, historical and academical, and the High Street is recognized as one of England's most picturesque thoroughfares; above are seen, on the left, University College; on the right, All Souls' and Brasenose colleges, between which rise the elegant, decorated spire of S. Mary's Church and, in the distance, the tower of All Saints' Church

Frith

but the university still meets in S. Mary's every Sunday in term time for its own service, and no one can claim to have seen every important side of Oxford life unless he has attended at least once and seen the Vice-Chancellor, Doctors and Proctors enter in solemn procession, and heard the ancient " bidding prayer " and the discourse of a " select preacher."

Embattled Pile of Magdalen

The colleges on the High Street itself are, in geographical order, Brasenose, All Souls', University, Queen's and Magdalen ; Oriel, too, has now extended to the High, thanks to the generosity of its " Empire builder " son, Cecil Rhodes ; all of these are pre-Reformation, but only All Souls' and Magdalen have kept their ancient buildings to any great extent.

Those of Magdalen it is impossible to praise too highly ; Anthony Wood calls it rightly " the most rich and noble structure in the learned world," and Macaulay, though above all things a Cambridge man, and though he mars the name " Magdalen " with an unnecessary and erroneous final " e," devotes a whole eloquent paragraph of his History to a description of " the embattled pile, low and irregular but singularly venerable, which, embowered in verdure, overhangs the sluggish waters of the Cherwell."

Why Shelley was " Sent Down "

His description is given as an introduction to the story of the contest between James II. and the college, when almost the whole foundation submitted to expulsion rather than break their statutes, while the king, by his reckless disregard alike of legality and gratitude, did his best to destroy the loyalty to the Stuart kingship of Oxford and the Church. Magdalen, apart from its beauty, is famous in Oxford for the wonderful music of its chapel and for its generous endowment of natural science.

Among the other High Street colleges, University is perhaps mainly visited

for the sake of the monument to its son who was expelled, the poet Shelley ; his statue by Onslow Ford, enshrined in a special domed chapel, is often quoted as an example of a " tomb of a prophet," built by the sons of those who had " stoned the prophet " ; but it is difficult to see what college dons could do but expel a young " prophet " who had challenged martyrdom by fixing his pamphlet on " The Necessity of Atheism " on the doors of their chapel.

Queen's, opposite, is the finest specimen of classic architecture in Oxford, and, above all other colleges, is the home of old traditions ; here nightly the men are summoned to dinner by the " sound of the trumpet," and the Boar's Head song has been sung on Christmas day for nearly six centuries. It, too, has more local connexion—i.e. with the six northern counties—than any other college in Oxford except Jesus (the Welsh College).

College without Undergraduates

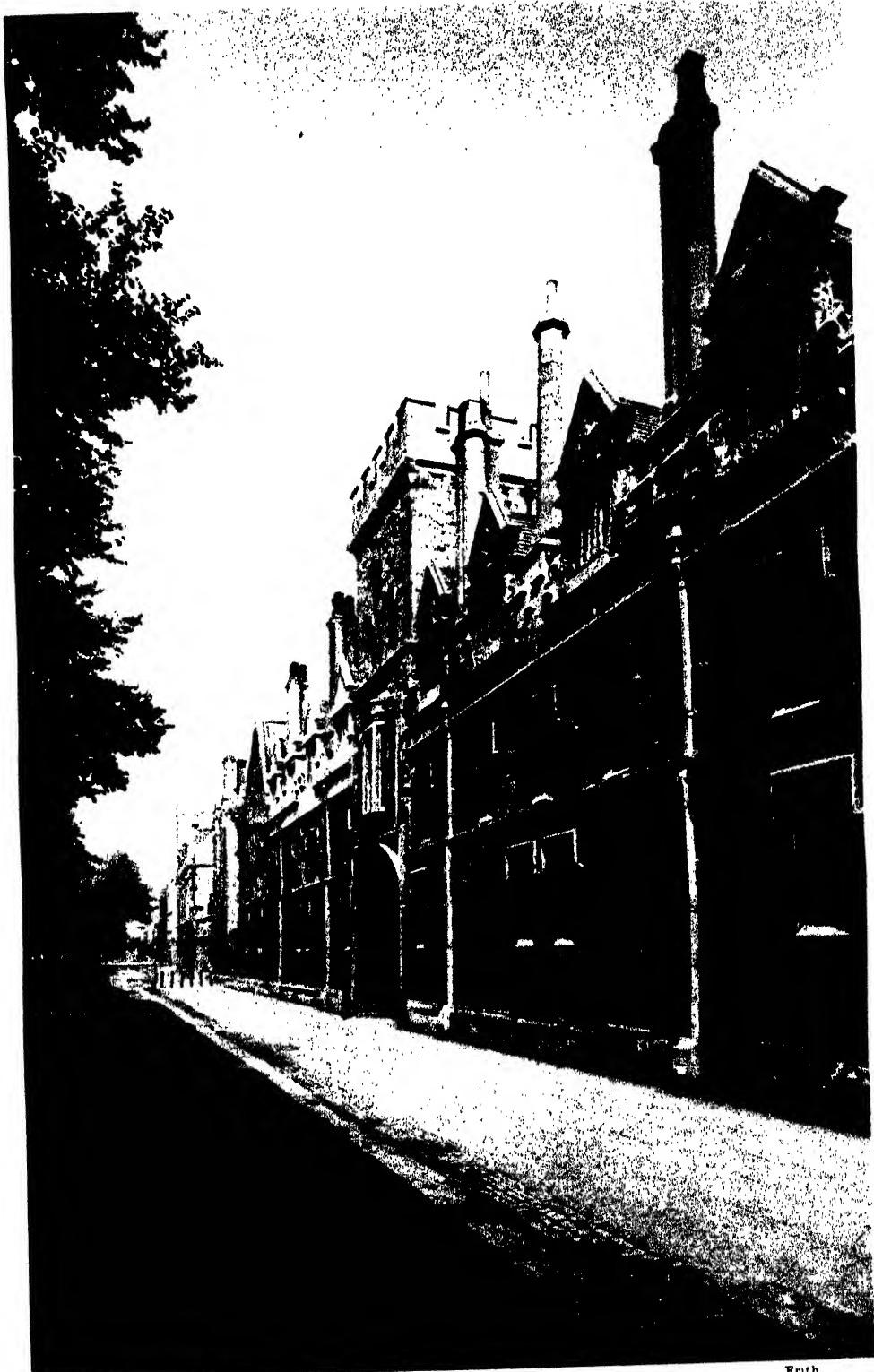
All Souls' is a puzzle to the visitor, because it is a college that teaches no undergraduates of its own ; the idea of a college of seniors, devoted to learning and not to teaching, has died out. All Souls' at any rate is the home, above all other colleges in Oxford, of the study of law, and it was here that Blackstone's once famous " Commentaries " were delivered as lectures.

Finally, Brasenose may still perhaps claim the distinction of being the most all-round athletic college in Oxford ; once at any rate she was

" Queen of the Isis Wave,
Who trains her crews on beef and beer
Competitors to brave."

Just as there are five colleges in Oxford south of the line of High Street, so there are five, still within the old City Wall, on the north of the High Street : Exeter, New College, Lincoln, Jesus and Hertford (to arrange them chronologically).

The very name of " New College " is significant ; it marks the triumph of Walter de Merton's system after 100



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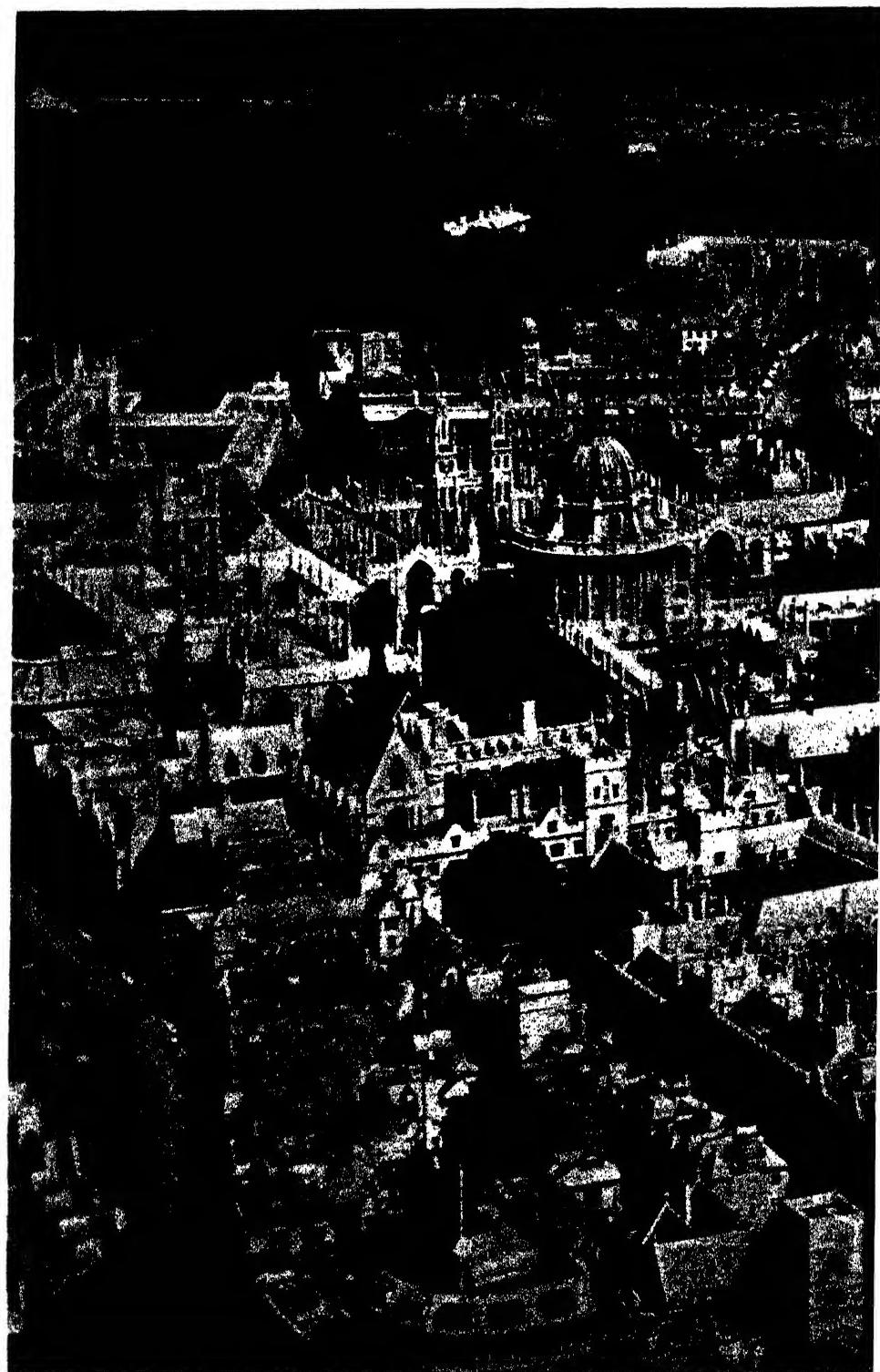
OXFORD. S. John's College, whose front faces the thoroughfare called St. Giles, occupies the site of an old Cistercian foundation



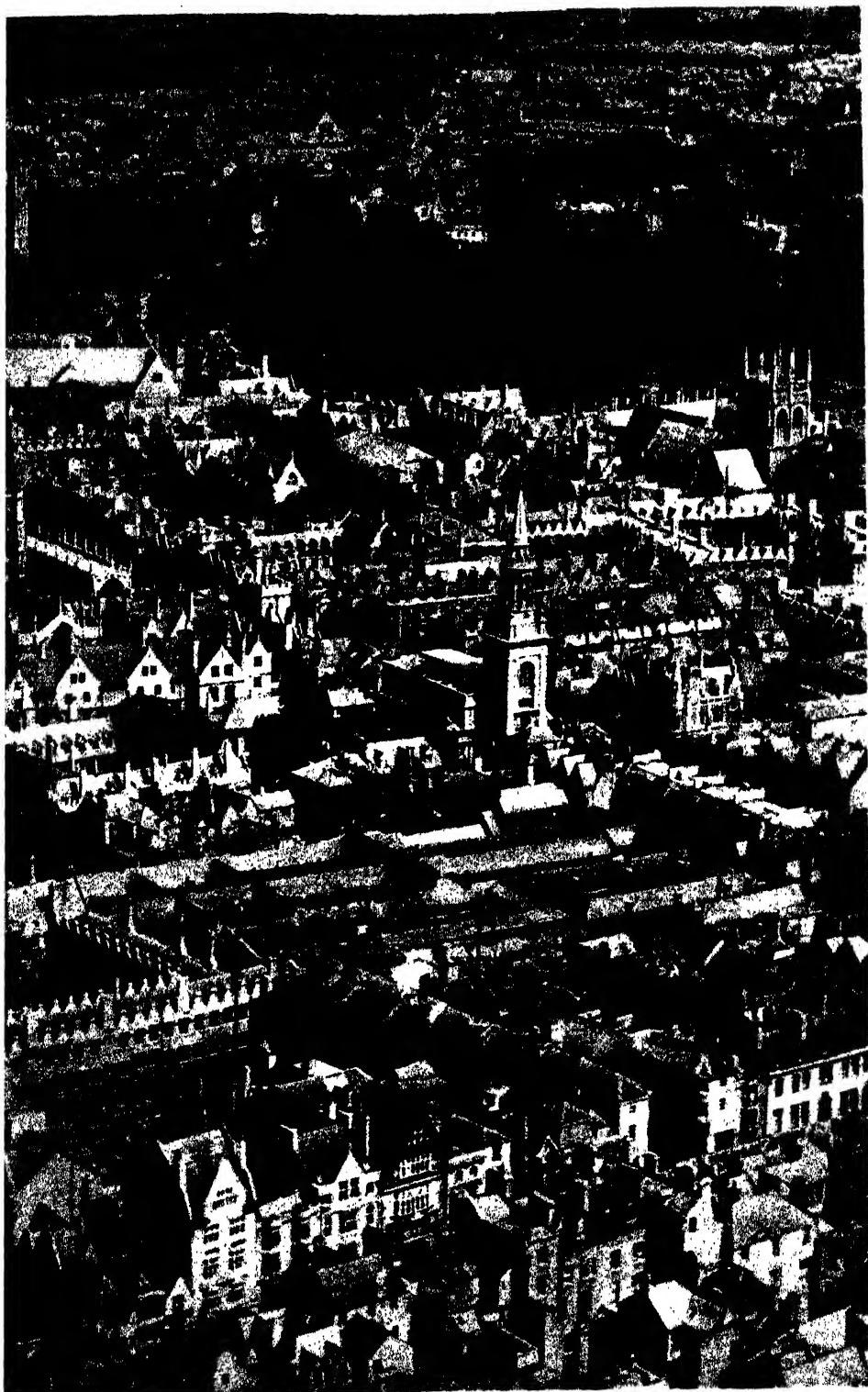
OXFORD. After passing under the wide bridge by Magdalen Tower the winding Cherwell twists past the Botanic Gardens to find the Thames. A canoe can explore this little stream as far as Islip

OXFORD. *The facade of Oriel faces the junction of Bear Lane and Oriel Street. Beyond, rising from the "High," is the stately spire of S. Mary the Virgin's, for some centuries the university church*





OXFORD. From the midst of this wonderful university city by the Thames, tower and spire seem to pierce the sky to challenge the low-flying aeroplane.

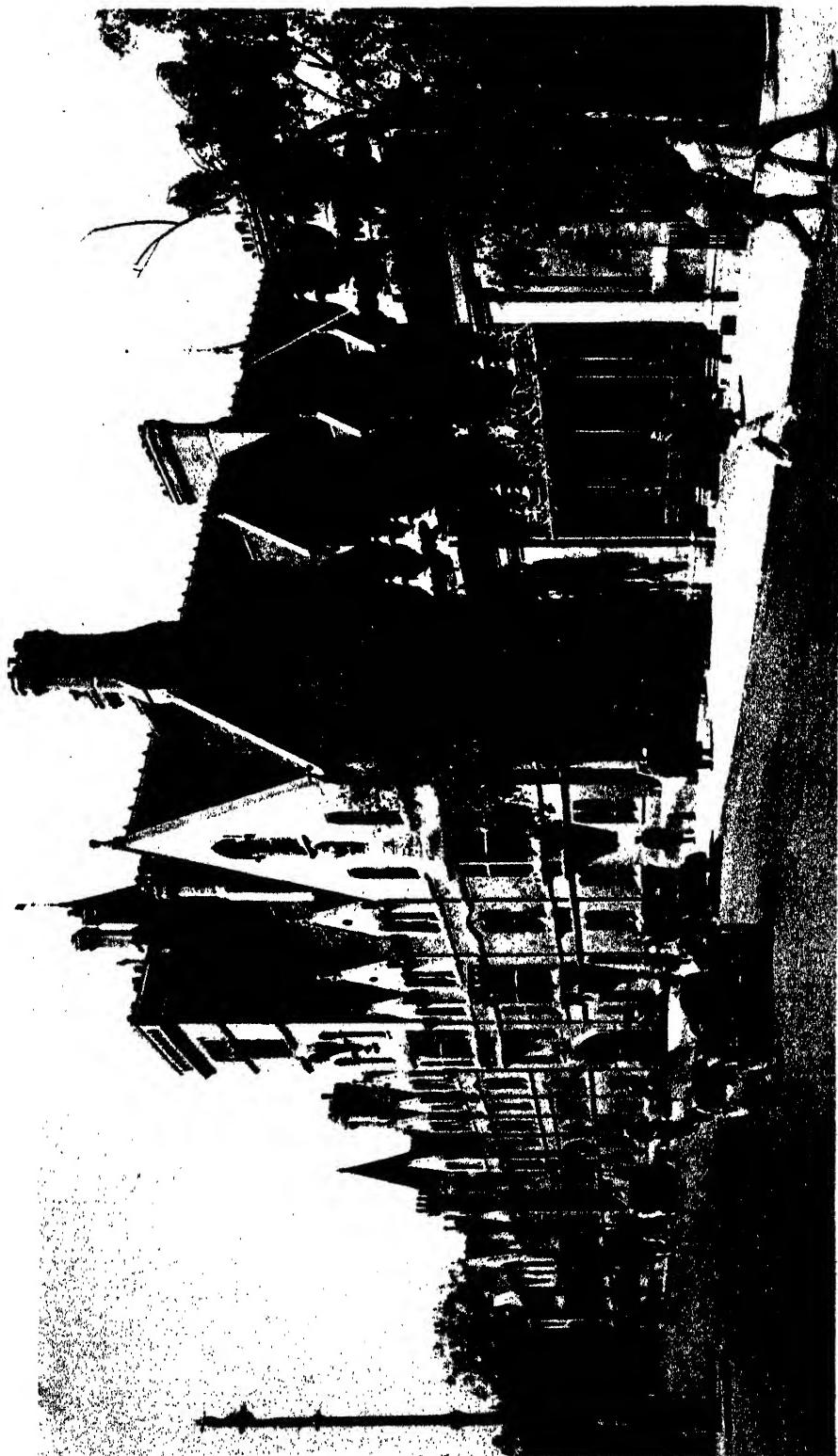


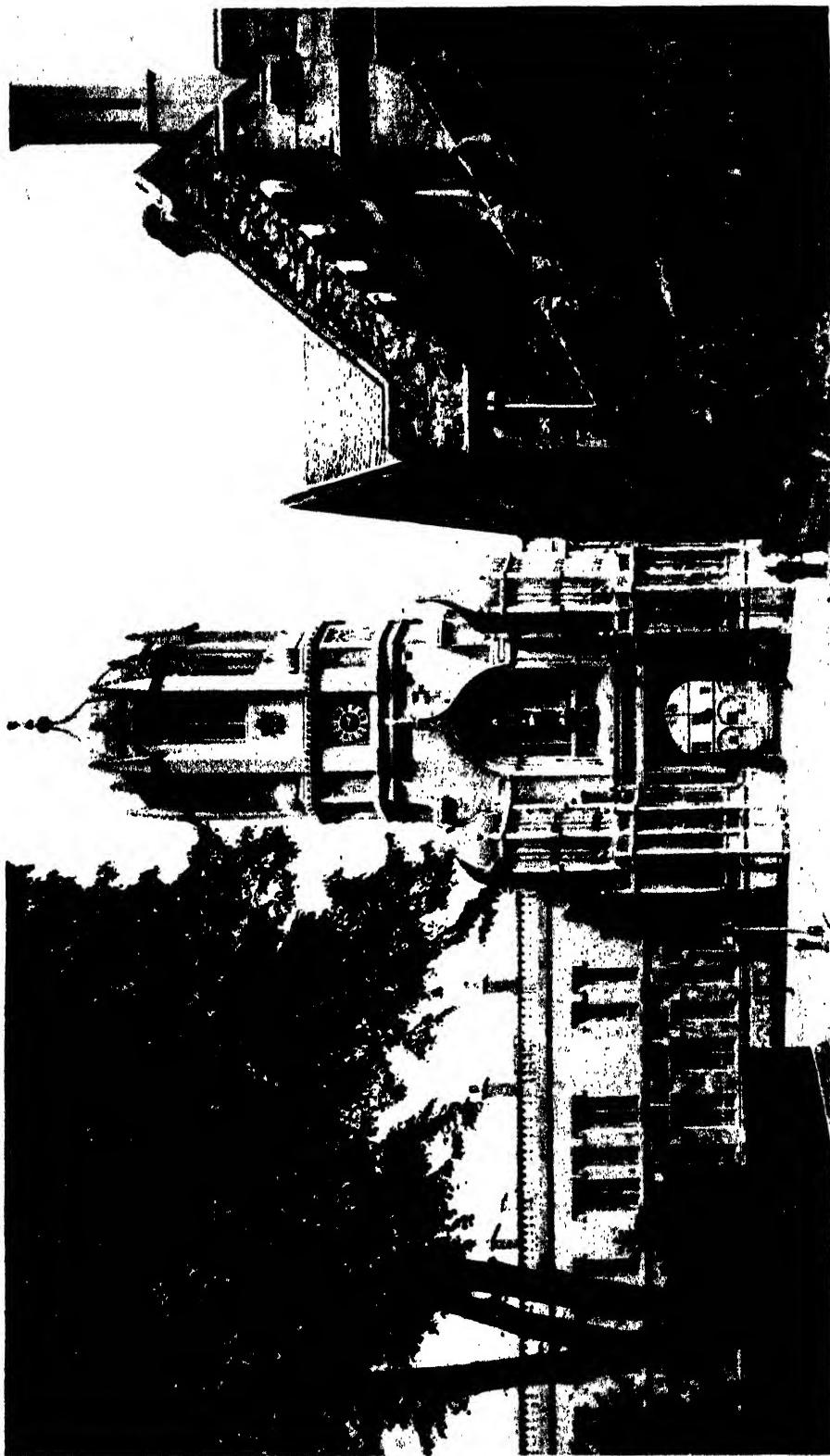
Aeroflins

Magdalen Tower, in a band of trees by the Cherwell, ends the curved sweep of the "High," beyond which are modern suburbs; on the left is Broad Street

OXFORD. Balliol is one of the oldest colleges, having been founded late in the thirteenth century, and at the side of the more recent buildings in Broad Street are the splendid iron gates of Trinity

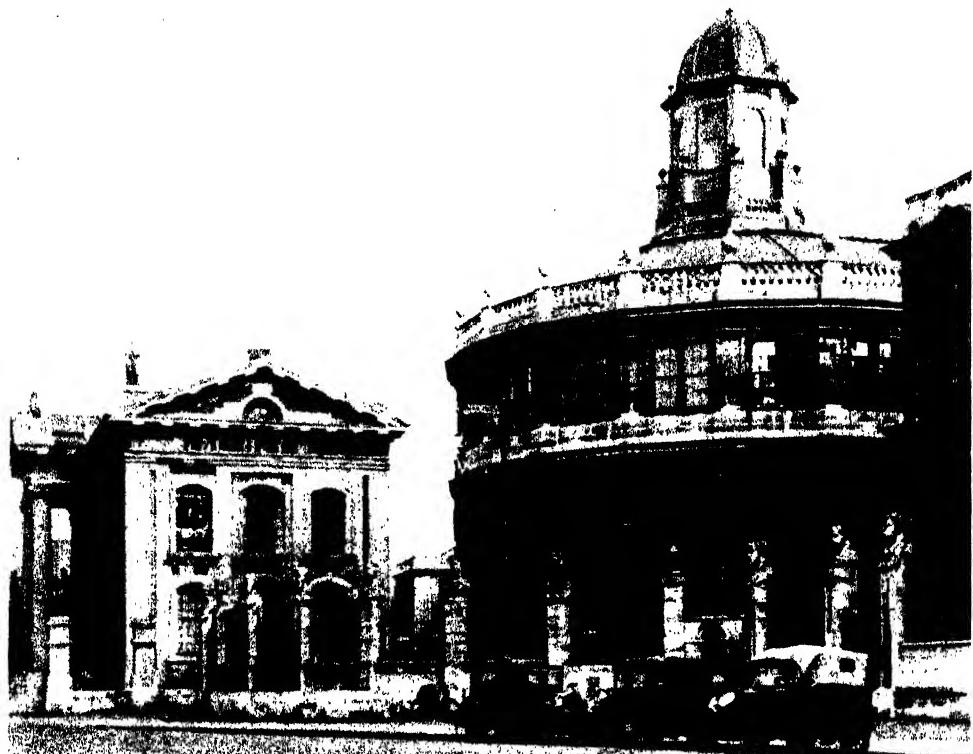
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OXFORD. At Christ Church in the Tom Tower, built by Wren over Wolsey's Gateway, hangs a huge bell on which 101 strokes are sounded every evening as a signal for the closing of all college gates

Friih



Herbert Felton

Before the Sheldonian Theatre in Broad Street are masks, said to be of the Caesars, and farther on is the Clarendon Building



OXFORD. New College appears beneath the bridge that in spanning New College Street unites two sections of Hertford College

years, and at the same time the magnificence of William of Wykeham's foundation, which, though it had six predecessors, yet was hailed as, and has remained, the "New College" above all others. And its buildings are worthy of its preeminence, with a chapel second to none in Oxford, with "chambers" that almost rival in age those of Merton, and above all with a wonderful section of the old City Wall, which runs round the college garden on the north and east for nearly 400 yards, and preserves the memory of what Oxford was like when it was a strong fortress.

The other colleges in this region do not present any very striking features, though all of them have points in their buildings which are of interest, and all of them have given famous names to the roll of Oxford worthies. Certainly the most conspicuous of these names is that of Wesley, who was elected a fellow (from Christ Church) at Lincoln in 1726 and resided for nine years, organizing his own life and his band of devoted friends by those "methods" which gained them a name, given for the moment in contempt and since held in honour the world over. The pulpit from which he preached is still in Lincoln Chapel, a building deserving of a visit for other reasons also.

Round about Radcliffe Square

But apart from New College, the main interest of this section of Oxford is the group of buildings in and round Radcliffe Square, and extending from the north side of S. Mary's to the line of the old City Wall. Here are the buildings of the university proper, not the property of any one college, but of the whole body of Oxford men.

Foremost among these on the west side is the building which contains the Divinity School below and the original Bodleian Library above; this was finished in the early days of the first Tudor king. The Divinity School—with its marvellous vaulted roof is a triumph of architecture, and has been the scene of many famous events.

The Bodleian Library, refounded in the last days of Elizabeth, has now absorbed almost the whole of the quadrangle which was built on to the original building in the days of James I.; this was originally intended for the university examinations — "The Schools" to use the Oxford term; but the examinations are now all held in the building in the High Street, close to University College, which was erected from the design of Sir Thomas Jackson about the year 1880.

Space for a Million Volumes

The Bodleian Library, oldest public library in the kingdom, and the second largest, has not only annexed the neighbouring buildings, but has also been dug down into the earth, where its two storeys of chambers are said to have room for 1,000,000 volumes. It uses as a reading room the beautiful domed building of Gibbs, originally an independent library, founded by Queen Anne's famous physician, Dr. Radcliffe. In the Bodleian and its reading room a man of endurance can still put in thirteen hours reading in a day, a record for library indulgence which is not often taken advantage of in full.

To the north of the Bodleian Quadrangle lie two more university buildings, the Sheldonian Theatre, a marvellous triumph of construction by the genius of Wren, and the Clarendon Building; these were successively the University Printing Press in the seventeenth and eighteenth centuries (this has now been moved nearly a mile away to the outskirts of Oxford); one of them is now the place for all the more important university ceremonies, the other the home of all the university offices.

Line of the Ancient City Wall

The western, the southern and the central sections of Oxford have now been described, and the line of the City Wall on the north reached; this is marked in the centre by the very early tower of S. Michael's Church (dating from the reign of the Conqueror) and



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CARFAX, THE HUB OF OXFORD, SHOWING THE OLD CHURCH TOWER

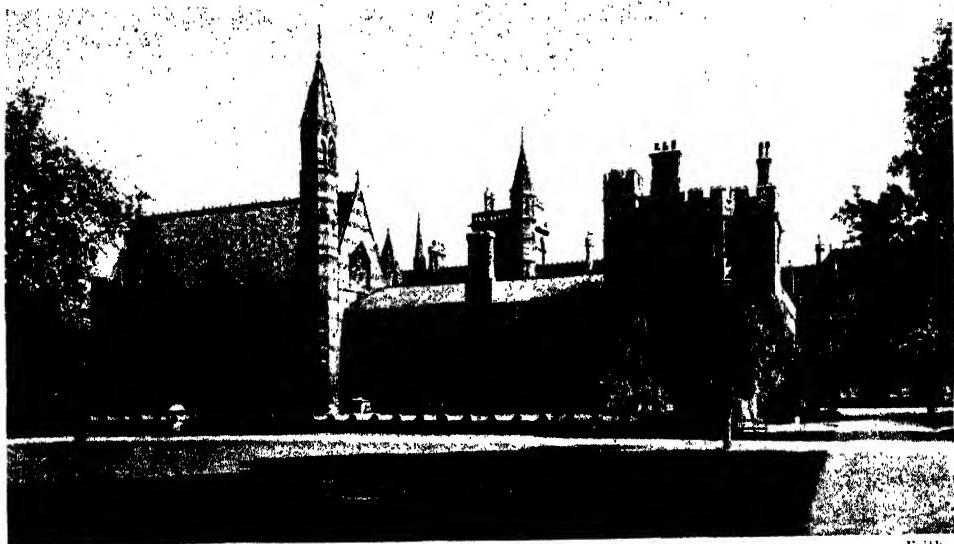
Carfax lies in the heart of the old city. The four thoroughfares radiating from it are Queen Street, winding away into the central distance of the photograph; High Street, directly behind the photographer; Cornmarket Street to the right, and St. Aldate's to the left. The tower is a relic of S. Martin's Church, one of the "oldest foundations" in Oxford, which was finally removed in 1896.



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AFTERNOON HOURS IN THE NORTH HALF OF CORNMARKET STREET

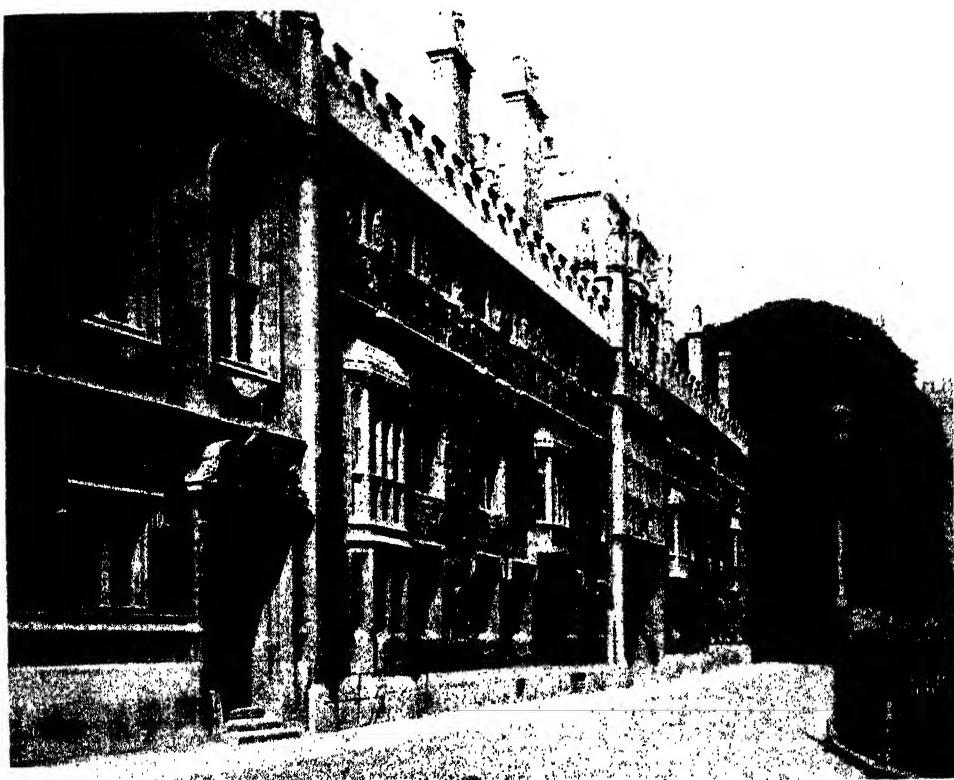
Cornmarket Street runs north from Carfax to Magdalen Street, which, in its turn, leads into St. Giles Street, a magnificent, broad thoroughfare bifurcating at the War memorial into the Woodstock and Banbury roads. The half-military, half-ecclesiastical tower on the right, once a watch tower of the old City Wall, belongs to S. Michael's Church; it dates from the Conquest and was restored in 1896.



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PICTURESQUE GROUPING OF BALLIOL'S HANDSOME BUILDINGS

University, Balliol and Merton share the distinction of being the senior colleges of the University of Oxford. Balliol ranks second in the official list, the date of its foundation being about 1265, but the buildings, including a chapel, hall and library, are mainly modern. Two fellowships, founded in 1906, commemorate Dr. Jowett, Master of the College from 1870 to 1893, the year of his death.



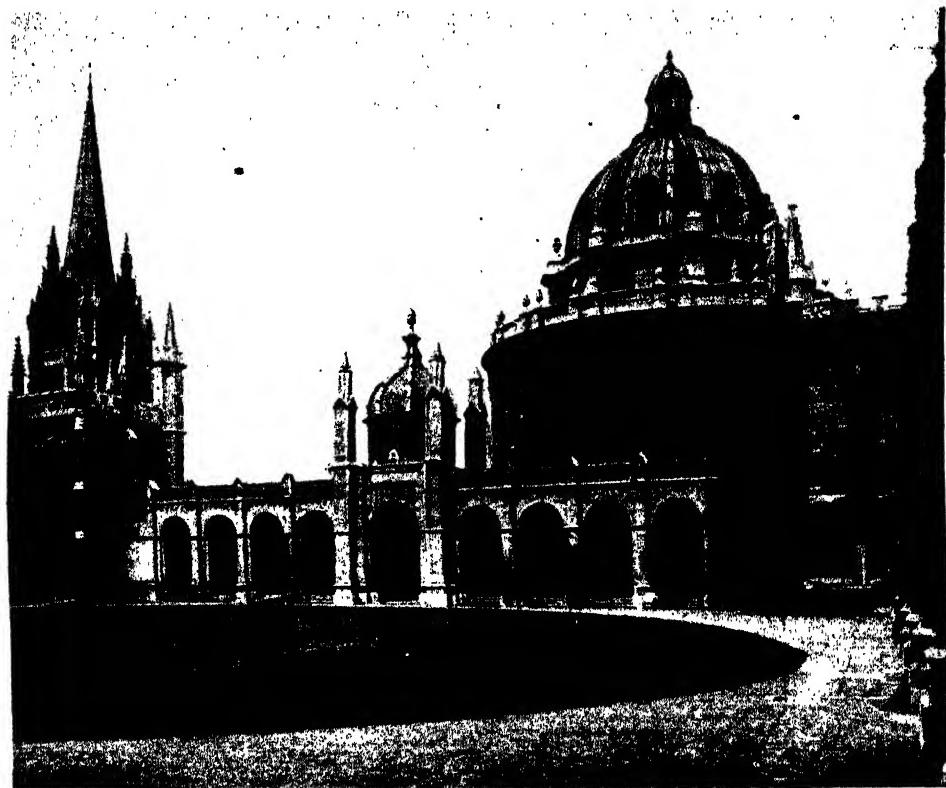
IMPOSING OLD FRONTAGE OF THE COLLEGE OF BRASENOSE

The foundations of Brasenose College were laid in 1509 by William Smyth, Bishop of Lincoln; a second founder of the college being his contemporary, Sir Richard Sutton. The buildings lie between Brasenose Lane and the High Street on the west side of Radcliffe Square and are mostly old; the modern buildings, completed early in the twentieth century, have been erected facing the High Street.

it is marked at the extremities, as has been said, by the Castle Tower on the west and the section round New College on the east. But even in medieval Oxford buildings were springing up beyond the Wall and its ditch, which lay on the line of Broad Street and Holywell. Of these the earliest was

House of Commons. As is fitting in a college whose importance is of such recent growth, more than half of Balliol dates from the nineteenth century.

Why Balliol was founded outside the City Wall it is impossible to say; but it is easy to give a reason for the choice of the sites of Trinity, S. John's, Wadham



Frith

IN THE SPACIOUS NORTH QUADRANGLE OF ALL SOULS' COLLEGE

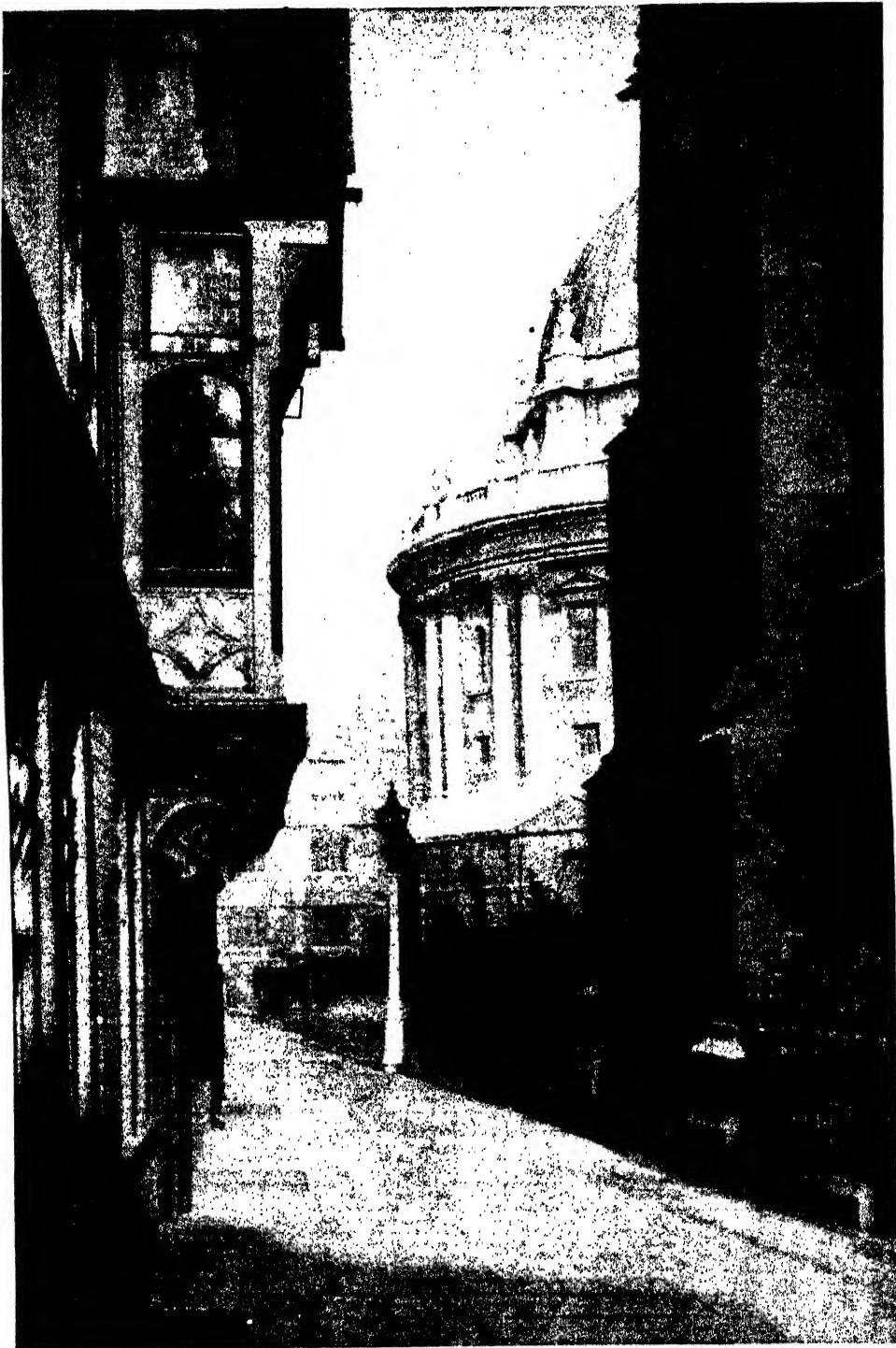
Styled the "College of All the Souls of the Faithful Departed," All Souls' College was founded in 1437 by Archbishop Chichele, chiefly to commemorate Agincourt. It is unique in having only four undergraduates, known as Bible clerks, and consists of fellows elected from distinguished men of other colleges. In the background are the Radcliffe Camera and the spire of S. Mary's Church

Balliol, till the nineteenth century a college of little importance, except for the fact that it had John Wycliffe for a short time as master; but since 1800 it has been easily the most successful in the field of pure scholarship.

If the pictures in Balliol Hall do not equal those of Christ Church in merit, they may compare in interest, for they include three archbishops, Tate, Temple and Manning; a prime minister in the Earl of Oxford and Asquith; a Lord Chancellor, and a Speaker of the

and Worcester. All of them are built where once stood important monastic foundations, which sought greater space and quiet than could be found in the crowded lanes of intra-mural Oxford.

Wadham owes nothing to its predecessor, the Austin Friars, but the other three have not only the sites but also some of the buildings of the Benedictine and Cistercian orders, which Henry VIII. converted to his own profit, and which the liberality and wisdom of pious founders reclaimed for learning.



Underwood

BEAUTIFUL SECLUDED CORNER IN HISTORIC OXFORD

Passing the university church of S. Mary the Virgin on the right and Brasenose College on the left, the narrow Radcliffe Street leads from High Street to the west side of Radcliffe Square in which stands the majestic Camera. This handsome rotunda, with a lofty dome on an octagonal base, was founded in 1737 as a library with funds bequeathed by John Radcliffe, the court physician.

It is characteristic of the continuity of English history that, in the darkest period of the Reformation, the reign of Mary, two great Englishmen, themselves adherents of the old form of the faith of the Church, purchased the old foundations and refounded them, to become centres of strength to the English Church as reformed by Elizabeth.

Cradle of the Royal Society

S. John's will be remembered as the college of Archbishop Laud, whose reforms in Oxford were, at any rate, more lasting than much of his work elsewhere; while Trinity is conspicuous for the number of its famous sons, of whom William Pitt, the Great Commoner, and Cardinal Newman are the best known.

Wadham may be singled out architecturally as the most perfect example of late Gothic in Oxford and in England (it was founded in 1613), and as having been under the intruded Warden of the Commonwealth, Dr. Wilkins, the "cradle of the Royal Society" and the home of that "prodigious young scholar, Sir Christopher Wren."

As might be expected with colleges founded outside the walls, four of these five last foundations have large gardens, each conspicuous for some feature; S. John's is the largest and shows the best "gardening" in the strict sense; Wadham has the finest trees; Trinity boasts its unequalled lime-walk, while Worcester with its combination of garden, water and parklike cricket ground need not fear to challenge comparison with the other three.

Stained Glass of Every Period

Still farther north than Wadham lie Keble, as its name implies, the child of the "Oxford movement," with a chapel which would have been one of the glories of Oxford had its architect, Butterfield, had any sense of colour, and the Science Museum, which, originally a Venetian palace, much admired by Mr. Ruskin, extends its ever-growing masses into the University "Parks."

Oxford is rich in history and in art of every kind; it is impossible even to touch on all her features of beauty and interest. The briefest reference, however, may be permitted to her panes of stained glass, in which she has no rival in England, except York. While the northern city has finer single specimens, Oxford is unequalled in the variety of examples which illustrate every period from the thirteenth to the twentieth century; witness the chapels of Merton (thirteenth century), of Christ Church—the Cathedral—and of New College (fourteenth century), of All Souls' (fifteenth century) and of Balliol (sixteenth century), of Wadham and Lincoln (seventeenth century), and of New College again with a unique series for the eighteenth century; the nineteenth century examples, good, bad and indifferent, are too numerous to quote. But the visitor who sees only the books, the stones, the pictures and the glass of Oxford, sees only the framework.

Sons who Keep Returning

It is the ever-growing life of the place which makes it one of the famous cities in the world. Oxford has been called the "home of movements," and some of these have been indicated above, and draw, by their memory, pilgrims from the world over. But it is her own sons especially who come back to her. Wherever the British race goes you find the Oxford man, cherishing the memory of the three or four "happiest years of his life," keeping up the old traditions under alien skies, looking forward to return once and again.

It is the spirit which prompts this love which makes Oxford a unique city—"unique," with Cambridge as a sister; whatever Oxford men feel for Oxford, Cambridge men feel for Cambridge—and rightly. Oxford is not forgetful to entertain strangers, and ever more and more they come to her and are welcome, especially England's own sons from over the sea; but her "secret which none can alter" is revealed in full to her sons alone.

PACIFIC ISLANDS OF THE NORTH

Fragments of An Ocean Paradise

by Lewis Spence

Author and Anthropologist

THE islands of the Pacific north of the Equator, although widely dispersed and varying somewhat in climate and environment, are yet so homogeneous in character, especially as regards their geological structure, history and natural products, as to justify their collective description.

Their several archipelagoes, although isolated from one another by great distances, have yet, as recent investigation has abundantly proved, been in more or less constant communication with each other and with many of the groups of the South Pacific for centuries.

It is believed that people of Polynesian stock from Samoa, the Hawaiki of their legends, reached Hawaii, the traditions of which retain memories of ancient navigators and searchers for pearls, while the language of that group preserves the distorted names of the distant lands whence its people came, and its customs fragments of their original beliefs and laws.

Beauty Scarcely Terrestrial

The great natural beauty and romantic associations of these islands have long been the theme of enthusiastic travellers and novelists, but it is doubtful if even the most inspired among them have succeeded in bringing home to the imagination of their readers the remote and ethereal loveliness of the Pacific insular atmosphere. This is indeed so far removed from the terrestrial that only the genius of a Shelley might have ventured upon its adequate description, and perhaps some faint conception of its marvellous beauty might be awakened by the rapturous passage in which he speaks of an island

of his poetic vision as "beautiful as a wreck of paradise."

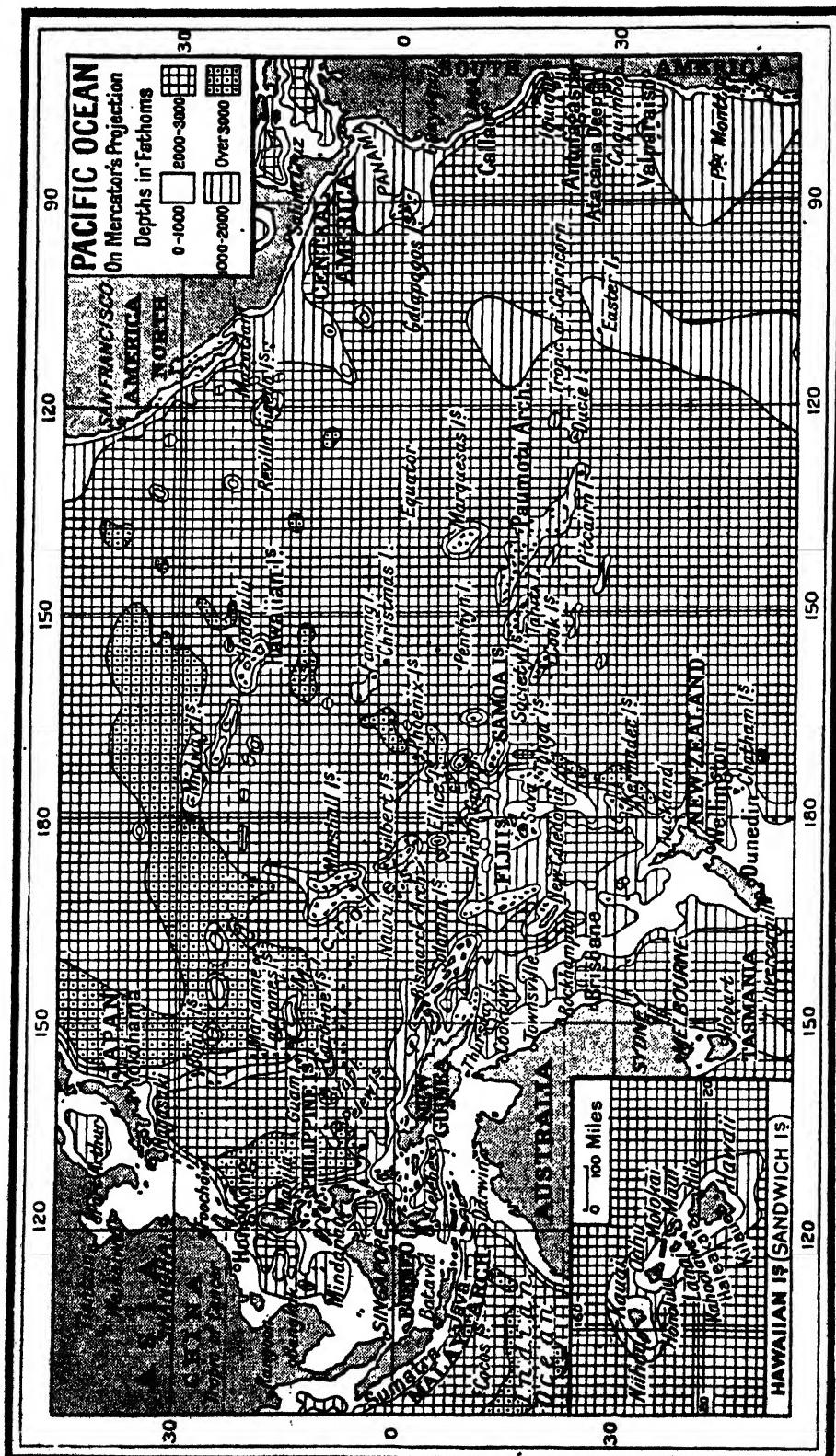
The islands of the North Pacific have been described by visitors of more materialistic tendencies as "realizing the Sunday School idea of Heaven," and even as "oleographic." But their serene airs, the luxuriance of their fairylike foliage and their simple and patriarchal life seem to justify their remoteness from the continents, and provide a reason for the ancient human belief that the idea of paradise is in some mysterious way associated with a far distant insular locality.

Classification of the Islands

These isolated yet romantic archipelagoes can be conveniently classified into the Hawaiian group to the north-east, the Fanning Island and Christmas Island group southwards of this and contiguous to the Equator, and the more scattered but still definitely related clusters of Micronesia, occupying a position to the extreme west of the North Pacific area and consisting of the Marshall Islands and the Ladrones and Caroline groups, with other isolated units on their fringe.

The Hawaiian group, otherwise known as the Sandwich Islands, lies immediately between the tropic of Cancer and the 20th parallel of north latitude, 2,000 miles from San Francisco. It numbers eight islands in all: Hawaii, 4,015 square miles; Maui, 728; Oahu, 598; Kauai, 547; Molokai, 261; Lanai, 139; Niihau, 97; and Kahoolawe, 69; or a total area of 6,454 square miles.

The archipelago is volcanic in origin, but its more rugged outlines are



FAIRY ISLANDS OF FIRE AND CORAL LOST IN THE WASTES OF THE NORTH PACIFIC

mellowed by a wealth of tropical vegetation and the numerous parklands and fertile valleys which are interspersed among its rocky heights.

The climate is salubrious. The Japan current, which is cooler than the land, lowers the temperature several degrees, rendering it almost ideal, seldom lower than 52° or warmer than 92° F. There is, however, a rather inadequate rainfall for a country in which evaporation is so rapid. At sea-level it amounts on the average to only 32 inches, so that irrigation is essential in some parts. The prevailing wind is the north-east trade.

Chief among the natural phenomena of the group is the world's greatest active volcano, Kilauea, which is situated on the island of Hawaii, about 225 miles south-east of Honolulu. A road enables the visitor to drive over the actual floor of the main crater of the volcano to within 100 feet of the fire-pit, the path descending through the most enchanting scenery for nearly 600 feet before it reaches the old lava floor of the main outlet. Of recent years Kilauea has been rather unpleasantly active, and the many tourists who have visited it describe its natural pyrotechnics as an awe inspiring spectacle.

The Massachusetts Institute of Technology has established an observation station on the spot for the study of volcanic phenomena, and the country surrounding Kilauea has been formed into a national park on the same basis as the Yellowstone and Yosemite Parks in the United States. Haleakala, the

crater of which is more than 19 miles in circumference, and 2,500 feet deep, is the largest extinct volcano in the world.

Queen Liliuokalani, the last Hawaiian monarch, was deposed in 1893 and a Hawaiian republic was proclaimed, but in 1898 the United States annexed the islands. Hawaii is, however, practically a self-governing territory. The population numbers about 256,000.

Honolulu, the capital, is situated on the island of Oahu, and has a population of about 75,000, to which are to be added the 11,000 officers and men of the United States naval and military forces resident



E. N. A.

LOVELY FALLS ON THE WAILUA RIVER

Kauai island is exceptionally well watered, the Wailua being one of the chief rivers and having its mouth on the east coast. A considerable portion of the island is covered by forests, but there are sugar and fruit plantations on the coastal plains.



MANY ACRES OF LAND ON HAWAII DEVOTED TO THE CULTIVATION OF PINEAPPLES

Of the fruits grown on the Hawaiian Islands the pineapple is the most important. Practically all the pineapples are canned on the island for export, only a small portion being sold for local consumption. Oranges, limes, mangoes, gooseberries and peaches are among the other fruits extensively cultivated. Sugar-cane, representing about three-quarters of the product of the territory, is the most important crop; the best situation for the plantations being at the foot of the mountains. There are large cattle ranches on the islands and flocks of sheep are pastured on the hills. Most of the export trade is with the United States.

there. The presence of these and the permanent establishment of other considerable bodies of troops in the great forts and garrison posts lend a marked military tone to the social atmosphere of the city, and has won for it the title of "the Malta of the Pacific." The spirit

consist chiefly of raw and refined sugar, fruit, rice, coffee and hides. The United States is naturally the largest importing country, with Australia and Japan as substantial competitors.

Communication in and among the islands is on an advanced basis. The



Underwood

LARGE TARO FIELD ON ONE OF THE HAWAIIAN ISLANDS

On the islands of the Pacific the taro is one of the principal food crops of the native inhabitants. The large heart-shaped leaves spring direct from the tuberous root and after boiling the naturally poisonous leaves are eaten like spinach. The roots are rich in starchy matters which are valuable food products. The plant's extreme acridity is got rid of during the boiling process.

of the community, as might be inferred from the mixed character of its population, is cosmopolitan.

The native Hawaiians take a prominent part in commercial and social life, but the rapid growth of the American-born population is tending to bring about marked changes in social custom, and the manner of living now differs but little from that prevailing in most American cities. Hilo, on the island of Hawaii, is the second city, and a place of some commercial importance, with a population of about 10,000.

The commercial activities of Hawaii are on a prosperous basis. The exports

railroads in Oahu, Maui and Hawaii are most efficient, and the first of these islands is almost completely girdled by a passenger line which has a branch to the famous pineapple district in the interior, further serving the great military post in Leilehua. On Hawaii a railroad of modern type runs from Hilo to within a few miles of the volcano of Kilauea, while another branch extends for 50 miles to the Hamakua district in the extreme eastern portion of the island. A good automobile service also links up these points.

The steamers of the Oceanic S.S. Company call at Honolulu on their way from

**STRANGE BARKING SANDS OF NOHILI ON THE ISLAND OF KAUAI**

On Kauai, the most northerly of the Hawaiian islands, there lies a stretch of sand which when walked upon or slid over emits a sound not unlike the barking of a dog. Kauai resembles the other islands of the group in that it is of volcanic origin. The interior is very mountainous and the plain fringing the coast is interrupted by wide valleys and low hills.

**MINOR CRATERS WITHIN THE HUGE MOUTH OF HALEAKALA**

On the island of Maui, one of the Hawaiian group, is Haleakala, the largest extinct volcano in the world. The crater covers an area of about 19 square miles and from its floor rise many cinder cones from 500 to 900 feet high. Haleakala attains an altitude of over 10,000 feet and is well wooded on its northern and eastern slopes, while its base is broken by ravines.



AT THE EDGE OF KILAUEA'S TERRIFIC CAULDRON OF FIRE

Kilauea is situated in the midst of a national park and has been made easily accessible by the completion of a road to the crater. The actual pit of fire is on the floor of the main crater and was formerly considered by the Hawaiians to be the home of Pele, the goddess of Kilauea, who was propitiated with sacrifices. The last violent eruption occurred in 1868.



Ewing Galloway

GIGANTIC PIT OF FIRE IN THE KILAUEA CRATER ON HAWAII

The crater of Kilauea is on the eastern slope of the volcano Mauna Loa. It is about 4,000 feet above sea-level and three miles in length and two in width. The bottom of the crater, which is the largest active one in the world, is a constantly agitated lake of lava. On Kilauea are small channels with steam cracks, along which grows the only vegetation in the region.



B. N. A.

WAIKIKI BEACH ON OAHU WITH THE EXTINCT CRATER OF DIAMOND HEAD IN THE DISTANCE

About four miles south-east from the centre of Honolulu, beneath Diamond Head, lies Waikiki. Formerly this place was only a small village, but it has been converted into a seaside resort which is renowned for its splendid beach, sun-bathing and fishing. Near Waikiki in Kapiolani Park is an aquarium of tropical fish. Oahu is a very beautiful island, though it lacks the lofty peaks of the other islands, the highest point being 4,000 feet. A coral reef which in places is half a mile wide encircles the greater part of the coast and in parts an old reef forms a portion of the island.



PORTION OF THE HARBOUR AND BUSINESS SECTION OF HONOLULU FROM THE PUNCHBOWL

Honolulu possesses a good natural harbour which has been greatly improved and a dry dock has been opened at the Pearl Harbour naval station, seven miles to the west. The business and older residential districts lie on low ground, while the newer buildings have been erected on the slopes of the surrounding hills. Behind the city rises the Punchbowl, an extinct crater about 500 feet in height. A railway which runs north and encircles the greater part of the island serves the town. Several lines of steamships call at Honolulu whose exports include plantation produce such as sugar, fruit, coffee and sisal hemp.

Sydney to San Francisco, as do the mail steamers from Sydney and Auckland to Vancouver. Cable and telegraphic communication is maintained by the Commercial Pacific Cable Company, which has a line from Honolulu to San Francisco, and to Asia by the way of Midway Island, Guam and the Philippines. The Federal Wireless Telegraph Company also maintains a service between Honolulu and San Francisco, and the Marconi Wireless Telegraph Company has two of the largest wireless stations in the world in the island of Oahu, connecting Honolulu with the American mainland. Each unit of the group has, moreover, its own telephonic system, and the separate units are also connected by wireless.

Atoll only Eight Feet High

Fanning Island lies about 300 miles north of the Equator, and almost directly south of Hawaii. It consists of a ring of coral, some 12 miles long and 6 broad, encircling a lagoon of great natural beauty, the beaches of which are surrounded by a deep belt of tropical foliage. At no point is it more than 8 feet above sea-level. For purposes of administration the island is incorporated with the Gilbert and Ellice group, which is under British protection.

Link in the "All Red" Route

But it is more important imperially than its size seems to warrant, as it constitutes the connecting link for the Pacific cable between Canada and Australia, thus making possible an "all red" route for telegraphic communication passing entirely through British territory. Indeed, the cable from British Columbia to Fanning Island is 3,500 miles in length, which easily makes it the longest in the world. The island, which has a heavy rainfall, supports a population of between four and five hundred, only 20 of whom are white, the remainder being native recruits from other groups engaged in the copra trade. In 1914 the German warship *Nürnberg* made a descent upon Fanning Island, cut the cable and dismantled the station, but

it was not long before communication was reestablished.

Christmas Island lies three degrees north of the Equator, a coral fringe nearly 100 miles in circumference, surrounding a large but shallow lagoon, rich in pearl-shell. In 1904-5 it was leased from the British Government by Lever's Pacific Plantations, Limited, who planted it heavily with coconut-trees, later transferring their interests to another company. Until this period it was treeless and uninhabited, and now maintains a small and fluctuating population engaged in the copra trade. It takes its quaint name from the circumstance that it was discovered on Christmas Day, 1777, by Captain Cook.

The Micronesian archipelago embraces the Pelew and Caroline Islands, Guam, the Ladrones and the Marshall Islands, these several groups being rather loosely scattered over a space which stretches from the Equator to the twentieth parallel of south latitude.

Sunrise and Sunset Islands

The Marshall Islands, formerly a German possession, were occupied by Japan shortly after the outbreak of war in 1914. The group consists of 46 coral atolls distributed from north-west to south-east in two parallel chains, the easterly portion being known as the Ratak or "Sunrise" and the westerly as the Ralik or "Sunset" islands. Their aggregate area is about 150 square miles, and their population is estimated at about 12,000. They were discovered by the Portuguese in 1529, and became a German possession in 1885.

There is considerable variation in the climate of the several islands of the group, rainfall being heavy in the southern and central atolls. The north-east trade winds prevail from December to July, and from July to November westerly winds and calms are usually experienced. Devastating hurricanes are of frequent occurrence. In the more northern islands prolonged droughts render the climate arid and interfere with growth. The southern



Underwood

BUILDINGS OF HONOLULU ALMOST HIDDEN AMONG THE TREES

Honolulu has been constructed on very modern lines with wide macadamised roads. It is provided with electric lighting and tramways, while beautiful tropical trees and flowering shrubs grow everywhere. The city has several parks and a botanical garden, and lacks the mean streets which often mar the appearance of towns in the tropics. It is the see of Anglican and Roman Catholic bishops.

islands are more fertile and produce in abundance coconuts, pandanus, breadfruit of several varieties, bananas, papaws and taro, while in the northern group the staple growth is arrowroot. A feature of the fish supply is that such as are caught inside the lagoons are frequently poisonous, whereas those taken outside are often quite wholesome.

At one time the Marshall group, particularly Ebon, was a great rendezvous for European whaling vessels. Here the ships refitted and obtained wood, water and provisions, and the conditions then prevailing appear to have faintly reflected those of buccaneering times. But towards the last quarter of the nineteenth century

Australian and Californian traders began to visit the islands, and a wealthy Hamburg trading company took over their administration, with power to impose taxation. Australian and American firms found that they could not compete with the subsidised German corporations, to whom they eventually disposed of their remaining interests.

A subsequent effort by an Australian house to reconstitute British trade in the archipelago induced strong protective measures by the German authorities. These were discontinued as a result of international negotiation, but the large subsidies enjoyed by German shipping companies gave them an undue advantage over their British rivals.

The native stock is, unfortunately, rapidly decreasing, despite the extraordinary efforts made by the German government during its period of tenure to cope with the problem of the falling birth-rate. The people are handsome and intelligent, hospitable and peaceful, make remarkably good sailors, and are nominally Christians. The trade is entirely confined to copra and fruit. Kwatelene, the most considerable island of the group, is one of the largest coral atolls in the world, and is nearly 100 miles in circumference.

Frequent Destructive Hurricanes

The Pelew and Caroline Islands lie between the Equator and the eleventh north parallel, stretching across 30° of longitude. They form a chain of 652 islands all told, which support a mixed population of about 30,000. The archipelago is divided for administrative purposes into the Eastern Carolines, the capital of which is Ponapé, and the Western Carolines and the Pelews, the chief station of which is situated at Yap.

The climate is equable and moist, the mean temperature being 80° F. The rainfall is not excessive, and the trade wind blows for the greater part of the year, but devastating hurricanes are frequent, resulting in extensive damage and considerable loss of life.

Monuments of a Vanished Race

Discovered by the Portuguese in 1527, the archipelago was annexed by Spain about 1686. The Spanish government evinced but little interest in its administration until in 1885 the German flag was hoisted at Yap. The incident led to international negotiations, which were determined in favour of Spain, but in 1889 the islands were purchased by Germany for £840,000. In 1914, shortly after the outbreak of war, they were occupied by Japan.

The Pelew group on the western verge consists of nearly 200 atolls, Babelthuap being the largest. The fertile soil produces breadfruit, bananas,

coconuts and sugar-cane, and supplies of turtleshell and bêche de mer are considerable. The food supply is plentiful, cattle, fowls and goats thriving, while fish abound on the coast. About 300 miles north-east of the Pelews lies the Yap group, consisting of one large island, Yap, with the islets of Ramung and Map to the north.

Yap supports a native population of about 8,000, and is prodigal in its growth of giant taro, mamme apples, pineapples, plantains, and almonds. It contains many vestiges of a vanished civilization of considerable advancement, mounds, terraces and roads paved with well-hewn stone blocks and large council-houses adorned with elaborate carvings. The scenery is of the richest tropical character, and deep groves of coconut and bamboo and the graceful areca palm rise on every hand. The chief port is Tomil on the east coast.

Cosmetic for the Carplines

The Uluthi or Mackenzie group lies to the north-east of Yap. The most important trading centre is Mokomak or Arrowroot Island. Uleai is rich in pearlshell and bêche de mer, which are brought to Raur, its principal port and market. The Ruk or Hogulu group consists of 70 islands of basalt and coral formation situated in the middle of a lagoon with a circumference of about 140 miles. It exports the commodities typical of Micronesia, and an orange-coloured cosmetic known as "taik" which finds a ready sale all over the Caroline Islands.

Ruk has a population of about 9,000, in which two distinct races figure, the dark hill tribes and the lighter coffee-coloured people of the coast. The Mortlocks comprise three groups, Lukunar, Satoan and Etal, 98 islands in all, with a population of about 2,000.

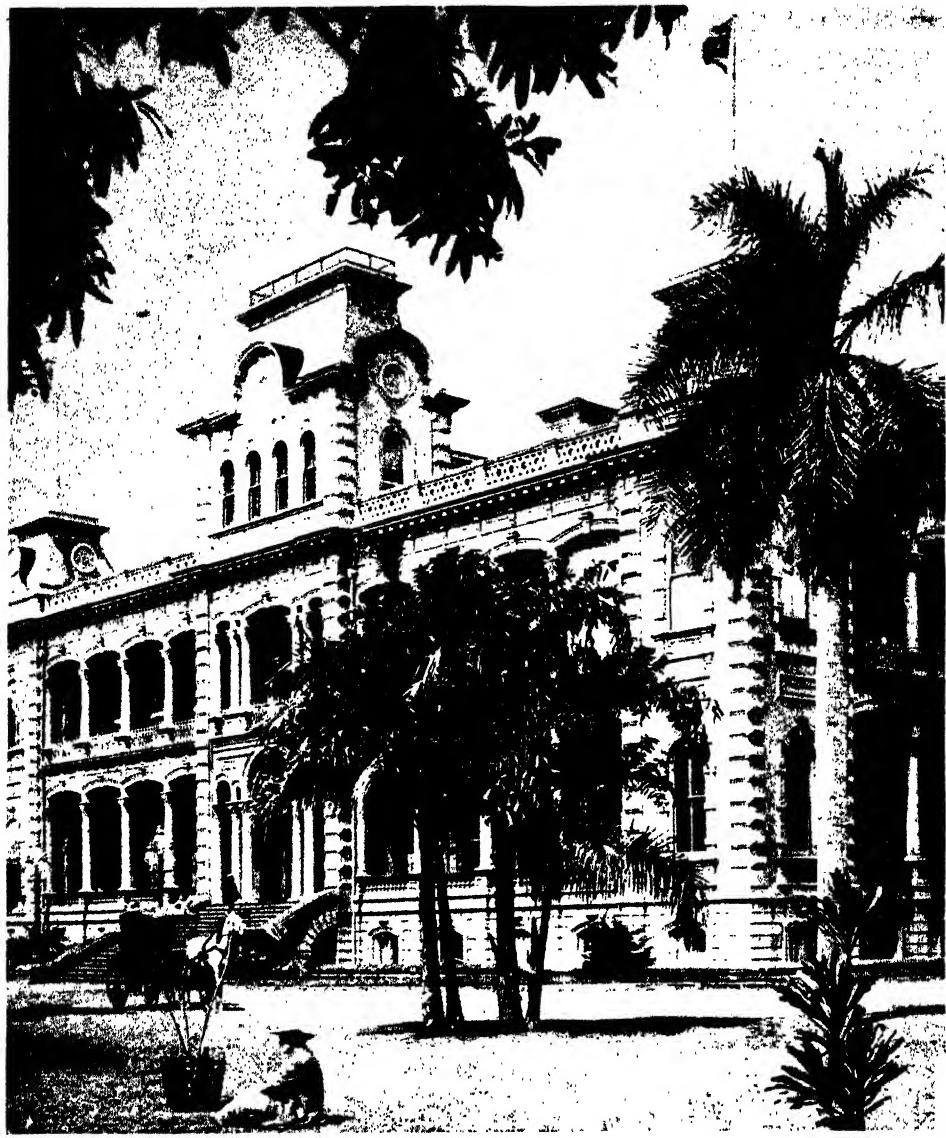
More important in some respects is Ponapé or Ascension, with the adjacent lesser archipelagoes of Ant, Pakin and Ngatik. Ponapé itself is about 340 square miles in area, and is



S. Basely

AVENUE OF MAGNIFICENT PALMS IN A GARDEN AT HONOLULU

The mountains behind Hilo on Hawaii constitute one of the wettest regions of the world, the annual rainfall sometimes being 200 inches. Honolulu has an average of about 32 inches, but the humidity of the atmosphere and a mean temperature of about 76° F. is favourable to a vigorous vegetal growth. Coconut palms, sandalwood trees, screw-pines and ferns, which reach a height of 30 feet, are indigenous



HONOLULU'S EXECUTIVE BUILDING, ONCE THE ROYAL PALACE

In an extensive park at Honolulu are the fine executive offices which contain many relics of the former native rulers, the last of whom was Queen Liliuokalani who was deposed in 1893. Honolulu was merely an ordinary village till 1815, when it was fortified, and in 1920 it became the virtual capital of the islands. The county of Oahu was created the city and county of Honolulu in 1909.

surrounded by a large reef and lagoon containing 33 lesser islets. Its population of 3,000 is nominally Christian, although ancient heathen practices are by no means unheard of. Of volcanic origin, it is richly clothed with tropical vegetation from the beach to its loftiest eminence, its heights gradually rising in forest on forest of magnificent timber trees. Along the coast the country

is flat, and inland long levels and slopes are watered by broad, swift currents. The interior is uninhabited, and yields practically every valuable tropical product in abundance.

The chief interest of Ponapé is, however, archaeological. On its south-east shore are the ruins of Metalanim, an ancient megalithic city, the origin of which is shrouded in mystery. It



E.N.A.

OUTRIGGER CANOE ON THE KITI RIVER IN THE ISLAND OF PONAPE

Ponapé, the largest of the Carolines, belongs to the eastern group. All the islands are of volcanic origin and all mountainous in the interior. There are some ancient cyclopean ruins on Ponapé; but none of these huge structures seem to have been built by the ancestors of the present inhabitants.

Under water there lies a section of the walls of a large city which was intersected by canals



Ewing Galloway

NATIVES OF THE MARSHALL ISLANDS BUILDING CANOES

The Marshall Islands form two groups of islands in Micronesia and were formerly German territory, but are now administered under a mandate by Japan. The natives construct their canoes out of the trunks of bread-fruit trees. No nails are used, all the parts being secured by coconut fibre. Canoe building is the chief industry, as these craft have a market on the neighbouring islands



E. N. A.

NATIVE VILLAGE NEAR CHABROLHAFFEN ON THE ISLAND OF KUSAI

Chabrolhafen or Lälo is the principal port of Kusai, one of the Caroline islands which are all administered by Japan. The land is well watered and very fertile, the chief products being coconuts, copra, taro and yams. The fisheries are of considerable importance, a certain amount of dried fish being exported as well as trepang (fécé de mer), turtle and pearl shells. Kusai possesses some ruins of a similar nature to those on Ponapé. Close by is the small island of Lele on which are huge rocks which appear to be the remnants of what at one time must have formed part of a citadel with tremendous ramparts.

would seem to have been the Venice of the Pacific Islands, its streets were canals lined by enormous stone blocks and in its remains are found tombs containing shell beads and axes of curious design. The site bears evidence of Polynesian origin, although an early Japanese invasion has been advanced to account for it. The ruins cover

have since disappeared beneath the surface of the ocean.

The Ant group lies about 12 miles off the west coast of Ponapé, and is a cluster of 13 atolls, the largest of which is Kalap, given over to the copra trade. The Mokil group numbers three small islands, Urak, Manton and Kalap, which is the most important.



E.N.A.

NAURU ISLAND: STORING RAIN WATER FROM A COCONUT PALM

Nauru, for the administration of which a mandate has been conferred on the British Empire, is an atoll 400 miles from the Marshall Islands. Owing to the scarcity of fresh water broad leaves or pieces of metal are thrust into the palms to catch the rain water which is drained off into tanks. There is a plateau on the island bearing high grade phosphate which forms the principal export

11 square miles and in some places the walls are still 30 feet in height.

To quarry, raft and haul such gigantic blocks of stone as are found here to their present situation must have occupied the labour of tens of thousands of workmen. Some of the stones weigh over 30 tons. At no time can Ponapé have supported more than 20,000 inhabitants, so that the builders must have drawn upon a very much greater population. Professor Macmillan Brown, of Christchurch, dates the foundation of the city in the pre-bronze era of Japan, or at least 3,000 years ago, and believes that Ponapé was once contiguous to other large islands which

The natives here, who number about 200, have a Marshall Island admixture, as have those of Pingelap, which supports about 1,000 souls, and which is more conventional and systematic in its civilization than many of its neighbours, rejoicing in trim walks and well-kept plantations.

Kusai, or Strong's Island, sometimes described as "the garden of Micronesia," suffered greatly in former times from the visits of lawless whaling crews, who introduced terrible diseases which decimated the population, now reduced to a few hundreds. It is the headquarters of the American Mission in the Western Pacific. At Lele remarkable cyclopean

ruins are to be found, the traditional work of a race which arrived from the north-west. The island is covered from beach to summit with forests of valuable timber trees.

Some of this wood, of a species hitherto unknown to science, is of special value for ship-building purposes, being perfectly straight in the grain, of great length and impervious to the attacks of the salt-water worm. It has been used with success in the construction of a dry dock and wharves at Shanghai and other Chinese ports. The natives are, however, idle, and as the land produces sufficient for their simple needs, they have no inducement to exert themselves.

The Ladrones or Marianne Islands, discovered by Magellan in 1521, came under Spanish rule, but were made over to Germany in 1899, with the exception of Guam, the largest of the group, which had been ceded to the United States after the Spanish-American war. The archipelago, which is of volcanic origin, numbers 15 islands, lying between 13 and 21 degrees north, and having a total area of 450 square miles, with a population of 15,000.

The climate is tropical but salubrious, although occasional visitations of earthquakes and typhoons are experienced. The rainy season occurs in midsummer, when south-westerly winds prevail, but rain falls at intervals throughout the year. The islands received the name of Ladrones, or "thieves," from the circumstance that Magellan had a boat stolen by the natives, who are known as Chamorros, a race of Malay origin. The principal islands are Rota, Agiguari,

Timian, Saipan and Medinilla, of which the largest is Saipan, with a population of about 2,500, one half of whom are natives of the Carolines. Japanese cutters keep the island in touch with Guam and Japan. There are considerable exports of copra, but tobacco, coffee and cocoa are grown for local use only. The islands are mostly rented to various private traders.

In Timian are still to be seen great stone columns, the relics of a civilized race who lived under a kind of feudalistic and caste rule, being divided into nobles, priests and plebeians, whose faith was a species of ancestor-worship. The islands were occupied by Japan during the Great War.

Guam, which has an area of 210 square miles, has about 14,000 inhabitants. The capital is Agana, a busy market for the products of the island, which include copra, maize, rice, coffee, cocoa and sugar, besides valuable timber. Cattle are raised in considerable numbers. There are excellent roads. The cable of the Commercial Pacific Company from Manila to San Francisco passes through Guam, which is also linked with Shanghai, the Carolines and Celebes by means of the Dutch-German cable. There is a wireless telegraph station on the island.

The Bonin Islands are a small group of tropical islets lying about 500 miles to the south-east of Japan, and about the same distance from the most northerly units of the Mariannes. They are a Japanese possession, and their inhabitants are chiefly engaged in fishing and the copra trade.

PACIFIC ISLANDS: GEOGRAPHICAL SUMMARY

Natural Division. Oceanic island groups, usually coralline or coral-reefed. Note the numerous atolls. Some are volcanic, Hawaii and the Ladrones, and connect with the volcanic "fire-ring" round the Pacific Ocean.

Climate and Vegetation. Nearly all lie in the track of the north-east trade in the latitudes where continents are covered with the hot arid deserts; consequently, all may suffer drought at irregular intervals. The western islands lie near the stormy (typhoon) section of the Pacific.

Palm and jungle forest is the typical vegetation.

Products. Pearls, bêche de mer. Copra, coir, bananas, pineapples, arrowroot.

Outlook. Some of the islands have cyclopean monuments which testify to an ancient connexion with a continental civilization. All depend to-day upon their relative or strategic situation as sites for cable terminals, aerodromes, wireless stations, or as stepping-stones towards an imperialistic policy in the North Pacific.

PALESTINE

The Holy Land as It is To-day

by H. C. Luke

Assistant Governor of Jerusalem ; author of "The Fringe of the East "

DESPITE the fact that there are few names on the map more familiar to mankind, it is only since the Great War that the term "Palestine" has ceased to be a loose geographical expression and has come to denote a precise political unit.

When the name first appeared in human records—as Peleshet—it was given to the narrow strip of coast-land, the low-lying plain between Mount Carmel and the frontier of Egypt, which was ruled by the non-Semitic race of the Pelishtim, or Philistines. Palestine was, in fact, the equivalent of Philistia, and it was the passage and battle-ground of the armies of Egypt and Babylonia during the centuries of rivalry between these two great powers.

At a later stage the name came to be associated with the territory held by the Hebrews, in the same sort of way in which the designation "Armenia" has been loosely applied to districts with a certain density of Armenian inhabitants. At the time of Christ it meant the lands lying between the "River of Egypt" of the Bible (the wadi immediately to the north of El Arish) and Lake Huleh; while under the Roman Empire the province of "Palaestina" extended along the coast from the neighbourhood of Rafa to Caesarea, thence inland across the Jordan to Gerasa (Jerash) and to what is now the Hauran.

Divisions of Ancient Palestine

In the last years of the Roman Empire and under the Byzantine emperors Palestine was divided into Palaestina Prima, corresponding approximately to Judea, Palaestina Secunda, corresponding to Galilee, and

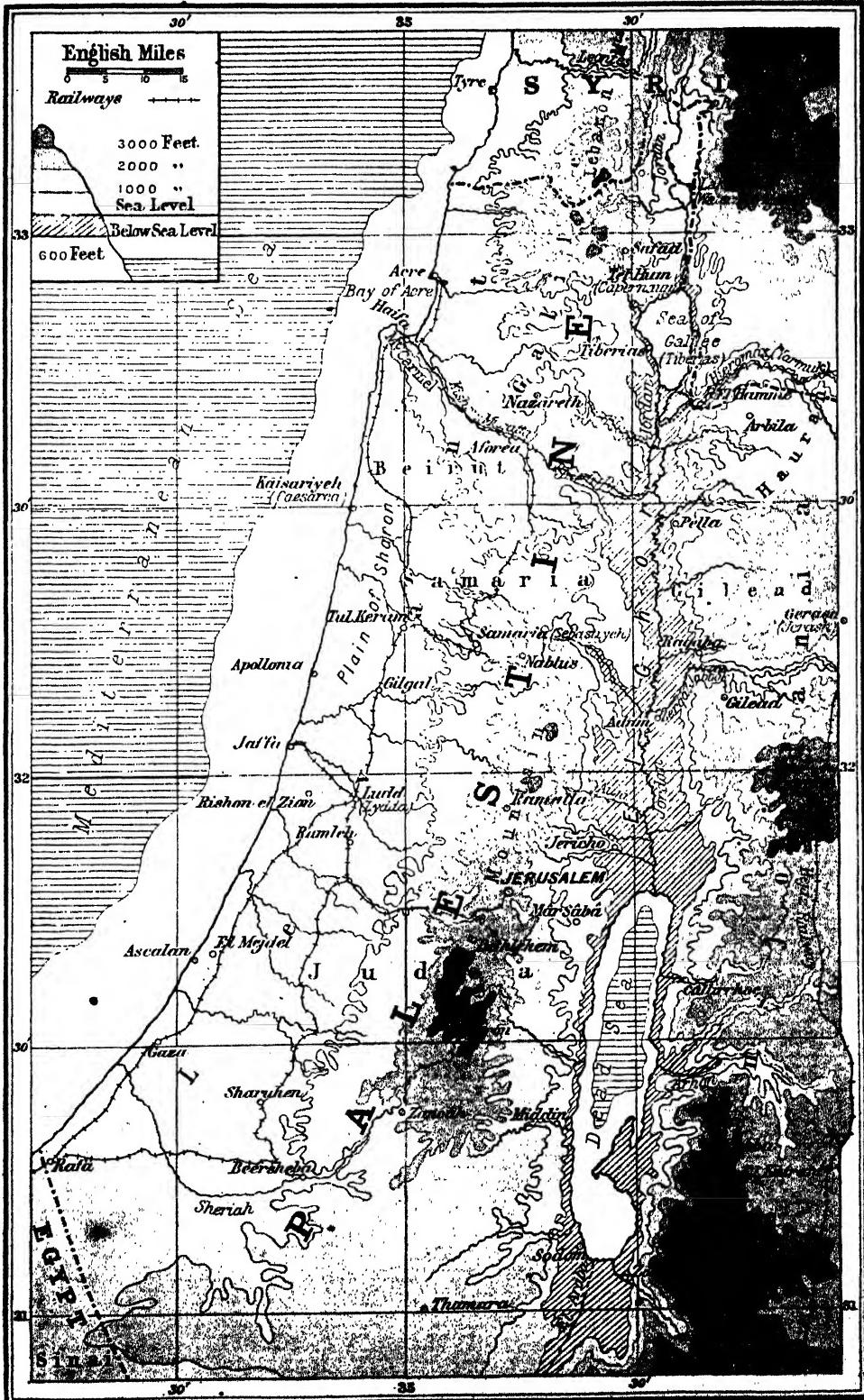
Palaestina Tertia, corresponding to Arabia Felix. With the Arab conquest in the seventh century A.D. the word Palestine lost its significance as defining a territorial entity, not to regain it until the Treaty of Sèvres and the San Remo Conference placed, in 1920, the area roughly equivalent to the old Palestine of Herodian days under the British mandate.

Natural Boundaries on Three Sides

Even so, the boundary between the new "Palestine" and the new "Syria" under the French mandate remained for a while unsettled; and it was not until February, 1922, that the frontier was delimited, the delimitation being ratified by the British and French governments in March, 1923.

But while Palestine has become, through the changes caused by the Great War, a political entity whose frontiers are established by international agreements, it is not and never has been a geographical unit. On three sides, indeed, its boundaries are naturally defined, to the west by the Mediterranean, to the south by the desert of Sinai, and to the east, if we are speaking of Palestine proper, by the river Jordan, or, if we include the territory of Transjordania, which is contained within the British mandatory area, by the great Syrian desert. To the north, however, where the frontier cuts across the Lebanon range, there is no natural division between Palestine and Syria; here the boundary is an artificial one.

In Turkish times, while Jerusalem combined with Jaffa, Hebron, Beersheba and Gaza to form an autonomous "sanjak," a sub-division of a "vilayet" or province, under the immediate



PALESTINE'S RICH COAST, TROPIC VALLEY AND ARID PLATEAU



J. E. Atkinson

BETHLEHEM, THE HOME OF DAVID AND BIRTHPLACE OF CHRIST

The royal city of David lies at an altitude of 2,550 feet on two mountain ridges five miles southwest of Jerusalem. Bethlehem, or Beit Lahm, as is the modern name, meaning "place of bread," was devastated more than once, but each time it recovered. The inhabitants are chiefly engaged in agriculture, or in manufacturing crosses, rosaries and other souvenirs for pilgrims.

jurisdiction of Constantinople, the sanjaks of Nablus and Acre lay within the vilayet of Beirut; politically, therefore, we may say that Palestine and Syria were a single unit.

Generally speaking, Palestine is a mountainous plateau, which forms the southern extension of the Lebanon range and ultimately loses itself in the deserts and hills of the Sinai peninsula. On the western side of the watershed the mountains, at no point higher than 4,000 feet, slope gradually down to the coastal plain, which, as we have seen, was the original "Palestine"; and on this side lie more than two-thirds of the country. On the eastern side of the watershed towards the Jordan the slopes are generally precipitous, broken at frequent intervals by valleys and canons of considerable depth.

The most important geographical fact in Palestine is a feature unique in the world, the Jordan valley or El Ghor. This valley, together with the chain of lakes through which the Jordan flows, forms a deep fissure, separating Palestine proper markedly from Transjordania. Its southern extremity is the lowest region on the earth's land surface.

The sources of the Jordan rise from the southern slopes of Mount Hermon, at a height of some 3,000 feet above sea-level, and the river enters the Dead Sea at a depth of 1,292 feet below sea-level. It first passes through Lake Huleh, the "Waters of Merom" of Scripture (seven feet above sea-level), and the Sea of Galilee, also known as the Lake of Tiberias (682 feet below sea-level), and then embarks on a winding course down El Ghor, falling at times as much as



Ewing Galloway

SQUARE BEFORE THE CHURCH OF THE NATIVITY AT BETHLEHEM

The Church of the Nativity, from which this photograph was taken, is erected in the east part of Bethlehem over the traditional site of Christ's birthplace. Many chapels and convents of Christian communities are in its vicinity, and for hundreds of years this little square, where the peasants and Beduins of the neighbourhood barter their goods, has witnessed such scenes as this.

**EARLY MORNING AT THE FRUIT AND VEGETABLE MARKET OF JAFFA**

Jaffa, the ancient Joppa, the seaport of Palestine, lies on the Mediterranean some 50 miles northwest of Jerusalem. It is an old historical town, and though much of its prosperity is due to the yearly influx of pilgrims, its trade is considerable, and it has long been famous for the prolific orange gardens which furnish large crops of fruit for export to foreign countries.

70 feet in a mile and attaining in places a speed of 12 knots. Lake Huleh is marshy, while the waters of the Sea of Galilee—liable, as in Biblical times, to sudden storms—are, especially at the southern end of the lake, quite fresh, clear and drinkable.

That strange phenomenon, the Dead Sea, whose dimensions are almost identical with those of the Lake of Geneva, receives approximately 6½ million tons of water daily, and is im-

Bible. The remainder are for the most part "wadis" or deep channels running dry in summer.

To its unique configuration the land of Palestine owes its outstanding characteristic, diversity. As the high commissioner for Palestine, Sir Herbert Samuel, has well said, the country offers "within the limits of a province the varieties of soil and climate of a continent." The traveller in Palestine, proceeding eastward from the coast, first



Donald McLish

SQUARE BUILDING OF THE MONASTERY ON MOUNT CARMEL

At the seaward end of Mount Carmel is the Carmelite Monastery, behind which is the church, built in the Italian style with a conspicuous dome. On a side altar is an old wood-carving representing Elijah, and below the high altar is a grotto in which the prophet is said to have dwelt. Close to the monastery is a building used by native pilgrims and surmounted by a lighthouse.

pregnant, owing to the extraordinary evaporation that ensues, to such an extent with mineral substances that its waters destroy practically all organic life. They have a bitter, nauseous taste, and are smooth and oily to the touch. So buoyant are they that swimming is difficult, owing to the tendency of the feet to rise to the surface.

Of the other rivers of Palestine little need be said. The most important are the Yarmuk, the Zerqa, the Auja and the Muqatta, the latter the Kishon of the

traverses the coastal plain, narrow but of proverbial fertility even where the soil is covered with a thin layer of sand, especially in that northern section stretching south from Caesarea, which is known as the Plain of Sharon.

Then he ascends the foothills—still green but with the soil gradually thinning above the projecting outcrop of white limestone—until he tops the backbone of the Mountains of Judea, and looks down the western declivity, whence he has come, on cornfields and occasional



Donald McLeish

RUINS OF THE SYNAGOGUE ON THE REPUTED SITE OF CAPERNAUM

Tel Hum has been identified by some authorities as the site of the ancient town of Capernaum. On the shore of the Sea of Galilee there are the remains of a beautiful building of white limestone resembling marble. The ruins are said to be of a synagogue and bases of the columns can be seen, while fragments of Corinthian capitals and richly ornamented lintels lie scattered about.

olive groves, but eastward over a scene of desolation tempered only by the beauty of its colouring. Through this forbidding wilderness he then drops for 4,000 feet to the tropical Ghor, a blend of rich irrigated tilth and a repellent belt of clayey mud, which in winter becomes a sea of slime. And he covers this tremendous gamut within a single morning, for Palestine is not much larger than Wales, and in three hours or four one can motor all the way from Jaffa to the Jordan.

Although Palestine has three climatic zones, the maritime plain, the central range of mountains and the tropical Jordan valley, it has but two seasons, a dry hot summer and a rainy winter, each accentuated according to the zone.

The climate of Palestine is a healthy one, and is characterised both by the extreme annual range of the thermometer

and by considerable variation of temperature within a single day, amounting in Jerusalem to as much as 23° F. in summer and 14.5° in winter. In Jerusalem and Hebron snow is not an infrequent sight, although it does not lie for long. The hill-country of Judaea can be very cold between December and March owing to the rain and the chill winds; the climate of the maritime plains in these months resembles that of the Riviera.

On the other hand, the summer heat of the maritime plain, with its extreme humidity, would be difficult to endure but for the cool sea breezes, which also bring daily relief to Jerusalem. The summer in the lower Jordan valley is torrid, and intolerable for Europeans.

The spring lasts from early in March to the end of May, when the hot season begins. From the middle of May to the end of October, often until well into

November, the sky is almost uninterruptedly cloudless. The average annual rainfall amounts to only 26 inches ; and it is unusual, even in the winter, for rain to fall on more than three to four consecutive days. A disagreeable feature of the climate of Palestine is the hot south - east wind, known as the " khamsin," which usually sets in about the middle of May and is liable to blow for several days without intermission. It causes the thermometer to rise to 104° F. and over, and the atmosphere becomes dry and oppressive.

As the meeting-ground of two continents Palestine exhibits such a variety of soil, climate, rainfall and physical conformation that, although not richly covered with vegetation, the variety of its flora is very wide for a country of its size.

The coastal plain belongs to the region of the Mediterranean flora, and is

similar as regards vegetation to Cyprus, Greece, North Africa, Sicily and Spain. Citrus fruits do well, especially around Jaffa. The hill-country produces a typical oriental steppe vegetation ; and here the fig, the olive and the vine flourish in suitable soil. In the Ghor we find a subtropical flora akin to that of the Sudan and the low-lying parts of Abyssinia. Here grow the " Balm of Gilead " tree and the " Apples of Sodom." As a fourth division there is the flora of the sand dunes.

Undergrowth includes varieties of pistacia, styrax, arbutus, clematis, cistus, laurel, myrtle and sumac, while the desert pastures consist largely of aromatic, saline and succulent plants and thorny shrubs, which support the Beduins' flocks of camels.

The causes which produce so strange an assembly of European, Asiatic and African types in the flora of Palestine



Donald McLeish

WALLED MASS OF MAR SABA MONASTERY NEAR THE DEAD SEA

In the fifth century a settlement of monks was founded here in the wilderness. Owing to its reputed wealth the monastery was often plundered, in consequence of which it became necessary to fortify it. The buildings are on a series of terraces supported by massive retaining walls. In the centre stands a domed chapel containing the tomb of S. Sabas, whose remains were removed to Venice.

likewise apply to the fauna, although, owing to the introduction of modern firearms and the destruction of the forests, several of the larger wild animals have become, as far as Palestine is concerned, rare or extinct. Among these are the Syrian bear, the leopard, the roe deer and fallow deer. Gazelle are still found, but, more commonly, wild swine, hyaena, wild cat, fox and jackal. The Syrian ibex has become scarce. The smaller mammals include hares, conies, porcupines, hedgehogs, several rodents and a score of bats.

Birds and Beasts and Fishes

As regards birds, the country can boast about one hundred resident species and at least two hundred migrants, some of which may breed locally in small numbers. Water-fowl are numerous; the eagle, kite, hawk, crow, wild dove and quail are common, but the partridge less so than formerly.

Fish are abundant off the coast and in the Sea of Galilee. Venomous snakes are rare; lizards are of general occurrence, and a score are known in the country. The domestic animals include cattle, sheep, goats, horses, donkeys, mules and camels. Buffaloes and pigs are relatively rare.

Possible Presence of Oil

Good building stone is obtained from the limestone beds of Cenomanian and Turonian age in Judea, and a beautiful stone, resembling marble, is secured from phosphatic beds of Danian age. In Galilee the prevalent rock is basalt. Dolomite limestone and marl beds also occur; and thin, bedded clays are found in the Jordan valley. Above the bone-beds there occurs in many parts of Palestine a shaly bituminous limestone, some of which would be suitable for road asphalt.

Besides the above occurrences of bitumen, which are examples of insipidated oil, there occur gas emanations and seepages of oil in several parts of the country, but more particularly in the southern part of the Dead Sea region.

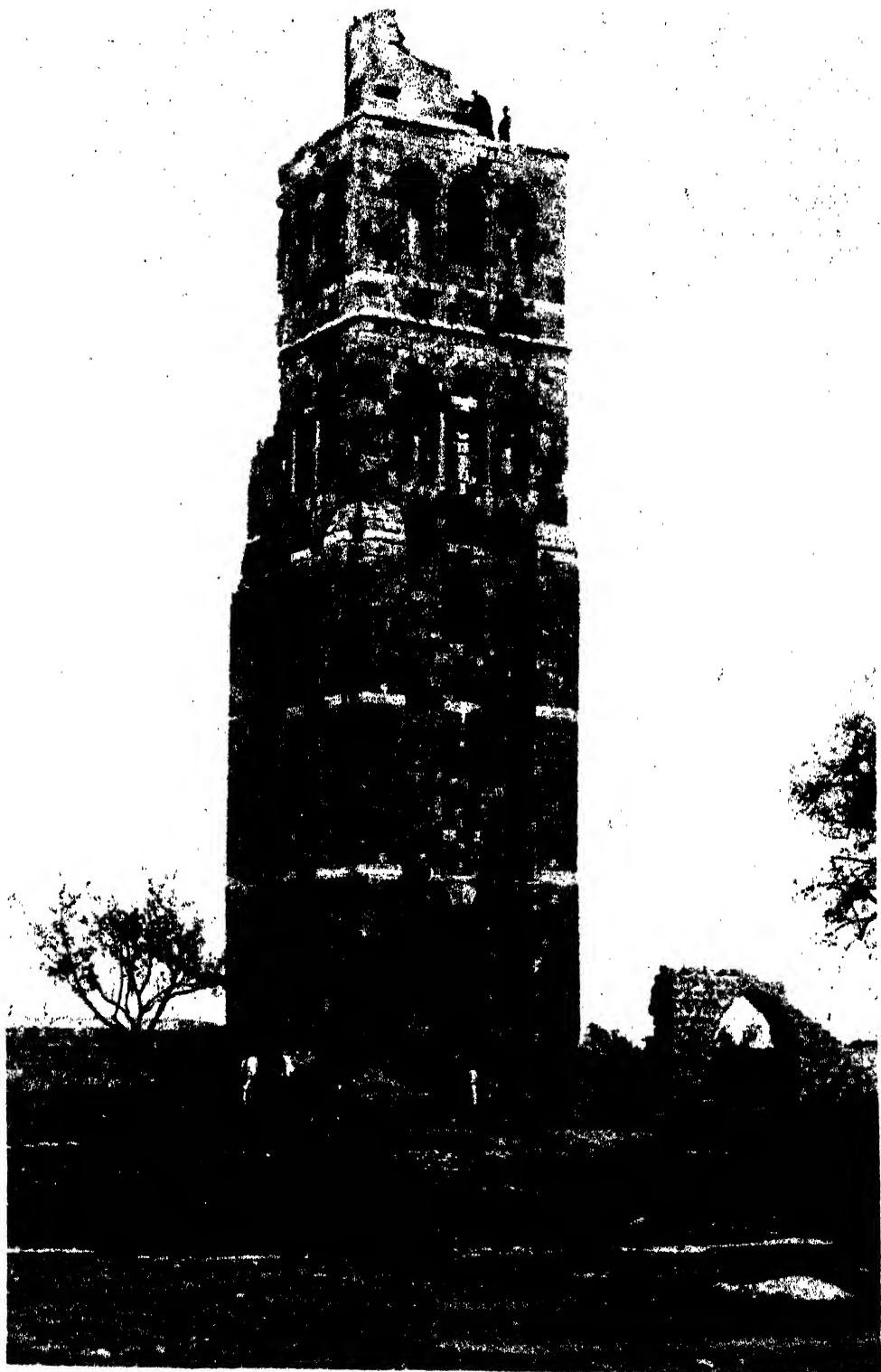
The consensus of expert opinion is that oil occurs in southern Palestine, but that only drilling will decide as to what are the commercial aspects of the problem. It is generally agreed that sunken blocks of the Ghor are petroleum-bearing, and that oil will be obtained from the Senonian-Turonian beds.

One of the greatest mineral assets of Palestine is the salt of the Dead Sea. The average percentage of salts in the strong brine is at least 25 per cent., of which 34 per cent. is sodium chloride, 4 per cent. to 7 per cent. potassium chloride, and up to 1 per cent. or more magnesium bromide. It is calculated that the Dead Sea contains roughly 30,000,000,000 tons of mixed salts, of which perhaps 1,500,000,000 tons are potassium chloride. Palestine is thus the richest country in the world for potash resources, but requires cheap transport facilities in order to be able to exploit them. The salts occur as a strong brine, immediately ready for evaporation and crystallisation for the production of pure salts by the natural heat of the sun.

Improving Methods of Tillage

Apart from some hundreds of persons occupied in fishing, the settled rural population is engaged in agriculture—generally primitive in the case of the Arab, scientific and progressive in the case of the Jewish colonist. A sparse population living in economic isolation and employing very primitive methods naturally adopts a farming system based on bare fallowing. Increasing pressure of population, and the upward trend in the values of agricultural holdings and produce, the partition of common lands, improved communications and demonstrations of better methods by new settlers are, however, having an effect.

Manuring and a rotation of crops for the maintenance of fertility are becoming recognized practices. With the exception of a few artificial plantations, the remains of the natural forests have been destroyed and the greater part of the hill-country is entirely bare.



PALESTINE. This shattered tower at Ramleh, which was restored during Saladin's reign, has been ascribed to the Crusaders

Ewing Galloway

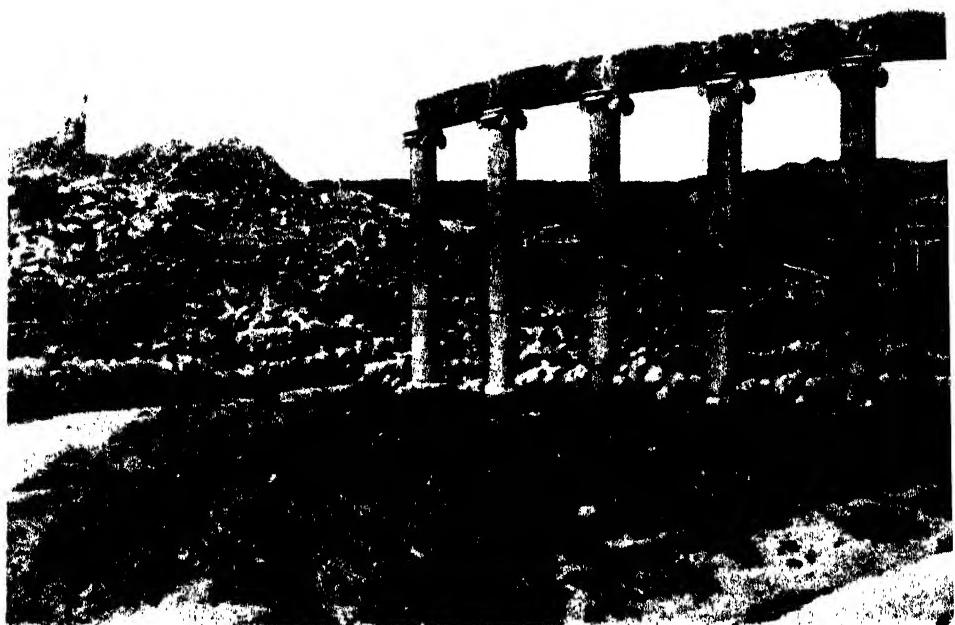
Debbie McLoch

PALESTINE. Acre has seen the coming of the chivalry of Europe clad in coats of mail, and heard the thundering canons of the hosts of Napoleon Bonaparte encamped about her ancient ramparts



Donald McElroy
PALESTINE. Below Mount Carmel, the home of the Prophet Elijah, is spread a patchwork of cultivation with the glistening town of Haifa lying beyond on the curving shore by the open Bay of Acre

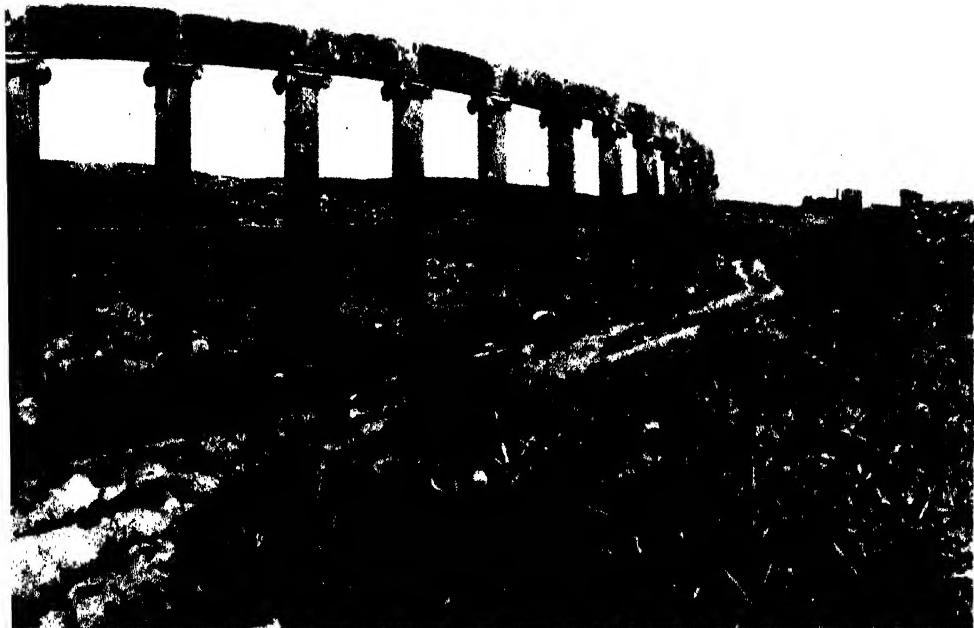




PALESTINE. Among the mountains of Gilead stand the desolate ruins of Gerasa, now styled Jerash, once a provincial reflection of Herod's Jerusalem.



PALESTINE. Here the arid plateau of Moab, the boundary between settled Palestine and nomadic Arabia, drops down to the Dead Sea below sea-level.



A vast semicircle of Ionic columns, connected with each other by an entablature, indicates the position of the Forum at the end of the Via Principalis

Capt. C. Fenwick Owen



Red sandstone, weather-worn into fantastic shapes and seared with bands of vivid yellow and purple, comprises this burning, inhospitable wilderness

Capt. C. Fenwick Owen



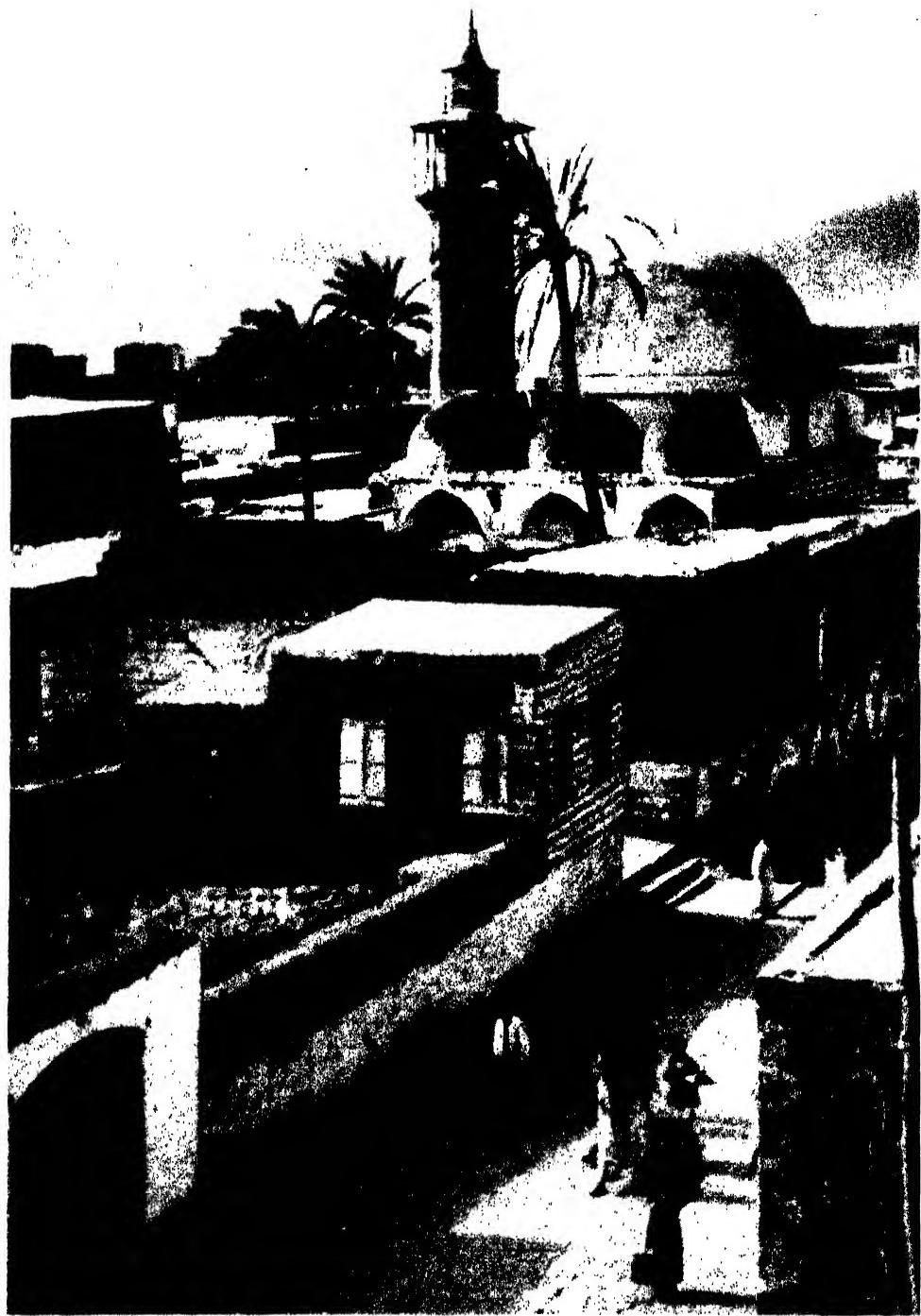
PALESTINE. Around the cobbled market-place in Ramleh the merchants sit before the dark caverns of their shops. Churches were here before the Crusaders and formerly the town surpassed Jerusalem in size.

Donald McLeish



PALESTINE. Herod encircled the terraced hill on which stands Sebastiyeh, the ancient Samaria, with the Street of Columns. Now there remains but a row of shafts in the stone wall beside a narrow track

Ewing Galloway



A. K. Dawson

PALESTINE. *At the foot of the mountains coming down to the Sea of Galilee lies Tiberias with its mosque and squat houses*

The indigenous Arab industries, such as the manufacture of soap from olive oil, of textiles, of leather work, of simple agricultural implements, of domestic utensils and of native musical instruments, is carried on under the usual Oriental conditions. So are the native arts and crafts, such as the glass-blowing at Hebron and the tilemaking, pottery and weaving in Jerusalem, which are being revived and fostered by the Pro-Jerusalem Society, the non-denominational organization founded in 1918 by Sir Ronald Storrs, the governor of Jerusalem, for the preservation of the ancient character and amenities of Jerusalem, and the encouragement of its historical arts, handicrafts and industries.

Jewish Stimulus in Industry

Political changes and an influx of Jewish immigrants accustomed to a European standard of life have given a stimulus to the building trade in its various forms. Tile, cement block and silicate brick factories have now been established, principally at Tel Aviv, the Jewish township adjoining Jaffa; and here, as in the wine factories of Rishon el Zion and other Jewish colonies, and in some of the larger flour-mills, European methods exist.

The distributors of the produce of the country and of its imports are almost wholly confined to the capital and the two principal ports, Haifa and Jaffa, where are also concentrated the lawyers and bankers. Doctors and schoolmasters are scattered throughout the country. As regards the former, Palestine is fortunate not only in the staff of the government department of health, but also in the generosity with which missionary and charitable organizations, Christian and Jewish, European and American, have placed gratuitously at the service of the population highly skilled medical men and women and scientific investigators in the prevention of the diseases prevalent in this part of the East. As regards education, Palestine is

similarly fortunate. Side by side with the establishments of the government department of education there are numerous schools, colleges, orphanages and similar institutions, for boys and girls, kept up by Moslem, Christian and Jewish religious organizations.

Constructing Roads and Railways

In a very few years Palestine changed from a country where communication was exceptionally difficult to one amply endowed in this respect. During the Great War the Turks began to build strategic roads and railways. Then came the conquering British army, which linked Palestine with Egypt by a standard gauge railway, extending from Kantara on the Suez Canal across the desert of northern Sinai to the Palestine frontier at Rafa, thence via Ludd (the junction of the Jaffa-Jerusalem line) to Haifa. The civil administration improved matters still further by causing the Jaffa-Jerusalem line to be relaid with standard gauge.

In 1921 the Palestine railway administration reopened the section of the Hejaz Railway between Nasib on the Franco-Transjordanian frontier and Ma'an in the Kingdom of the Hejaz. The civil administration has also repaired, maintained, and built a number of main roads and it is now possible to reach not only all the important centres of Palestine by motor-car, but also to travel, by regular motor services, from Palestine to Syria, Transjordania and Mesopotamia.

Motor Boats on Sea of Galilee

As regards water communication, a number of steamship lines connect the ports of Palestine with Marseilles, Trieste, Egypt, Syria, Cyprus, Greece and the ports of Turkey; motor and sailing boats are in operation on the Dead Sea and the Sea of Galilee. Palestine lies, as is known, on the air route from Egypt to Bagdad, and there are important aerodromes at Ludd in Palestine and at Amman, the capital of Transjordania.

Donald McLeish
WHITE WALLS OF NAZARETH GLEAMING IN THEIR GREEN FRAMEWORK ON THE HILLS OF GALILEE

Nazareth, in Arabic En-Nasira, lies on the southern slope of the beautifully undulating hill of Es-Sikh, midway between the Sea of Galilee and the Mediterranean Sea. Little is left of the ancient town where Christ spent his early years, and afterwards taught in the synagogue, but the modern Nazareth presents a very attractive appearance from the surrounding hills, its light-coloured walls, dazzlingly white in the sunshine, contrasting pleasingly with the greenery of cactus hedges and fig and olive trees. Most of its inhabitants, who number about 10,000, are Christians, and are occupied in farming and gardening.

Prior to the British occupation of Palestine there was no public telephone service whatever, the postal service was thoroughly unreliable, and several European powers were compelled to maintain their own services between Europe and various Palestinian towns, although the Turkish Post Office was the only one allowed to use the railway to Jerusalem. Under the British administration the department of posts, telegraphs and telephones, the organization of which is based on that of the British Post Office, operates main and local route wires. There is telephonic communication between all the larger towns, and direct circuits exist between Jerusalem, Cairo and Beirut. Wireless communication with Great Britain and ships at sea is provided via Egypt. Trunk lines connect the principal towns and villages of Palestine, and there are public call offices at all post offices.

Export of Oranges and Soap

As the soil and climate of the country are favourable to the production of excellent cigarette tobacco, this industry may be expected to develop rapidly in the absence of the Turk. Already a considerable amount of Palestine tobacco is being manufactured in the cigarette factories of Palestine side by side with tobacco imported from Egypt.

The principal item of export consists of Jaffa oranges, the production of which is rapidly recovering from its suppression during the Great War. The local soap, somewhat primitively made of olive oil and caustic soda, is another important article of export, something like half of the total annual production of 7,900 tons being exported to Syria and to Egypt, where the pure olive oil soap from Nablus, a Moslem centre, is particularly appreciated by the Mahomedan population.

Almond growing is becoming increasingly important in the Jewish colonies. Other important articles of export are wine, various leguminous crops and barley, the latter being in demand in

England for malting purposes. The biggest purchaser of Palestine products after Egypt and Syria is Great Britain, closely followed by the United States.

Cisterns for Water Supply

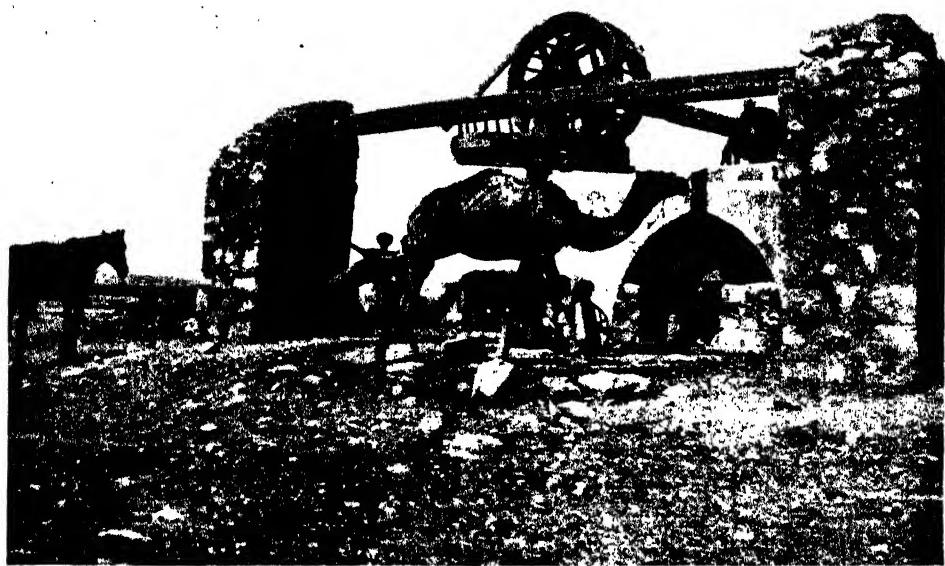
The principal imports are cotton fabrics, sugar, petroleum, coal, flour, iron and steel manufactures and machinery, timber, cigarettes, cotton yarn and cement. Of Palestine's total imports Great Britain supplies about 30 per cent., Egypt and the Sudan about 10 per cent. and Germany, owing to the favourable rate of exchange, a quantity which rose from 5 per cent. in 1921 to 12 per cent. in the following year.

The ancient distinction between towns and villages was based largely on the presence or absence of fortifications; the present criterion is mainly one of size. In a country such as Palestine, none too well provided with water and subject from time immemorial to Beduin raids from the east, the sites for human settlements were mainly determined by facilities for defence and the accessibility of water. Of the two considerations the latter generally gave way to the former; and some villages, which on this account are at a distance from their wells, strive to make good the deficiency with cisterns and open tanks depending on the rainfall.

Gravitation to the Towns

There has been a tendency in Palestine for the population of the towns to increase at the expense of the villages. This has been partly due to the ruin of native industries by the introduction of cheap manufactured goods from Europe; partly to the passing of agricultural land from communal ownership into that of individuals; partly, although this reason no longer applies, to the better protection afforded by a town; and partly to the fact that many of the fellahin, after a number of years spent in North or South America, demand amenities which a Palestinian village cannot provide.

As regards the villages themselves, there is a marked difference between



FEEDING THE THIRSTY EARTH IN PALESTINE'S BARREN PLAINS

Wells are of considerable importance in Palestine and, as in all lands with a similar climate, irrigation is indispensable to cultivation in the inhospitable regions. Water is drawn from the wells by means of various ingenious devices; sometimes, as illustrated above, a series of wooden buckets is attached to a chain and lowered into and raised from the well by revolving wheels operated by camel or donkey.



H. Ferrin

BEDUINS WATERING THEIR PACK ANIMALS ON THE WAY TO JERICHO

Jericho lies 15 miles north-east of Jerusalem with which it is connected by a road. The country is hilly, and in parts of very wild and deserted appearance; the winding rocky defiles serving as natural shelters for such robber-highwaymen as fell on the traveller in the Good Samaritan parable. The Beduins are a sturdy pastoral people, their innate migratory habits having inured them to all hardships.



PRIMITIVE PLOUGHING METHODS OF THE PALESTINE PEASANTRY

The customs of the population of Palestine differ but little from those described in the Bible, but the Biblical description of Palestine as a "land flowing with milk and honey" certainly does not tally with the economic conditions of the Palestine of the present day. Nevertheless, the fruits of the earth are not lacking for those who are careful to expend a proper amount of labour on the land.



CARAVAN RESTING AFTER TOILSOME DESERT TRAVEL

Camel caravan trade was common in the earliest Biblical days, and through the centuries these ungainly animals have maintained their reputation as the most suitable beasts of burden for desert travel. In Palestine they are also used for riding and even ploughing; the nomadic tribes are seldom without them, and the coarse kind of cloth woven from camels' hair supplies many articles of clothing.

those in the plain and those situated in the hill-country. The latter enjoy ample advantages as regards building material, and are, from the outside at all events, compact and neat, with their grey stone walls (black basalt in the Ghor) and ingeniously constructed domes. The former, unless their inhabitants can afford, as is rarely the case, to bring stone from a distance, are built of mud brick, and are apt to present a squalid appearance when compared with the Western-looking houses and bungalows of the Jewish colonies.

Beduin life in the tribal areas lacks all the comforts and amenities of civilization. The "Tents of Kedar," in which the Beduin are content to dwell, afford but the scantiest protection from sun, wind and rain; but the tribes possess considerable wealth in their flocks and herds. They obtain their corn by purchase, or exchange (in former days by robbery), or cause it to be cultivated on their own lands by hired fellahin, whom they generally regard with contempt.

With the exception of the two principal ports, Jaffa and Haifa, and of Gaza with its Egyptian affinities, the principal towns of Palestine are situated on the backbone of the mountainous plateau. Jerusalem, the capital, dealt with in an earlier chapter of this work, that "city compact together," is above all a place of religious association and appeal. So

also is Nazareth; so, from the Moslem point of view, are Hebron and Nablus; so, in Jewish eyes, are Safad and Tiberias on the shore of the Sea of Galilee. Acre, lying over against Haifa at the northern end of the bay, lies picturesquely within its fortifications; while, to the south of Haifa, the ancient city of Caesarea, the capital of Roman Palestine, has now shrunk to a village whose ruins are inhabited by a handful of Moslem immigrants from Bosnia.

Sanitation is primitive in the older quarters, but happily the country is relatively free from Oriental diseases. The department of public health conducts a vigorous anti-malarial campaign by inhibition of mosquito breeding, drainage and reclamation of swamp areas and other measures, and, together with the municipalities, insists that the cisterns with which the houses are provided shall be, in the case of new buildings, constructed according to mosquito-proof design. The mosquitoes are mostly of the harmless varieties, while flies are far less common than in many parts of the East. Ophthalmia is still prevalent among the poorer classes of the native population, and must continue to be so until these can be persuaded to adopt elementary principles of hygiene.

Out of a total population of 757,182 souls, 590,850 are Moslems, 83,694 are Jews, and 73,024 are Christians.

PALESTINE : GEOGRAPHICAL SUMMARY

Natural Divisions. Southern section of the Levantine coastland. Three divisions—El Ghor and the Dead Sea in the Rift Valley (cf. East Africa); the coastal lowland; the intervening plateau; all three roughly parallel to the coast.

Climate. Mediterranean in type, with winter rains and summer droughts. Local modifications in the three zones in accordance with differences in elevation combined with different distances from the sea.

Vegetation. Belt 1: Coastal zone of citrus and other trees. (Cf. Cyprus, Greece, Anatolia.) Belt 2: Upland steppe and scrub, with figs, olives and vines where soil and water can be obtained. Belt 3: Grassland and marsh on the valley floor. (Cf. Sudan.)

Products. Petroleum. Potash salts from the Dead Sea. Cigarette tobacco. (Cf.

Egypt.) Oranges. (Cf. Spain.) Soap, barley, etc.

Communications. Railways recently built. New and modern motor roads. Imperial airway crosses the country to Bagdad. Steamer services to the ports.

Outlook. Recently removed from the blighting dead hand of the Turk, yet with a people four-fifths Moslem; the goal of a religious organization and withal an historic country; a Mediterranean coastland on the edge of the Levantine cul de sac, Palestine has yet to demonstrate its ability to become a settled and ordered community. The auspices are fair, but time alone will show whether historic influence from the rest of the world will cause an eruption in conflict with the vis inertiae of a settled landholding of ancient date.

PANAMA

Isthmus State of the Great Canal

by Robert Machray

Author and Traveller

VERY few people think of Panamá apart from the canal, yet there is a not inconsiderable state of the same name which bounds the canal on both sides, and the capital of that state is the city called Panamá. These will be dealt with later in this article; the canal naturally and indeed inevitably must have pride of place.

If an atmosphere of romance surrounds the builders of the great roads and the finders of the great sea routes of the world, the same glamour of high adventurous achievement envelops the makers of the wonderful canal which, cutting the Isthmus of Panamá, joins the Atlantic and the Pacific.

The dreams have come true of the Spanish explorers and navigators who first set foot on that narrow neck of land that then united the Americas, and who had the vision to believe that here were the place and the opportunity for man to attempt and succeed in a tremendous effort to connect the two great oceans.

Balboa's Dream Comes True

Balboa (1475-1517) and the other soldiers and conquerors of their marvellous historic period who knew the Isthmus, told their sovereign of its possibilities; and some surveys were actually made. But nearly four hundred years had to pass before the canal was completed. Not till 1914 was it opened, and then experimentally and unofficially. It was only on June 12, 1920, that the president of the United States proclaimed its official opening, but in the interval it had carried a vast volume of traffic; and it possesses quite extraordinary significance, politically, strategically and commercially.

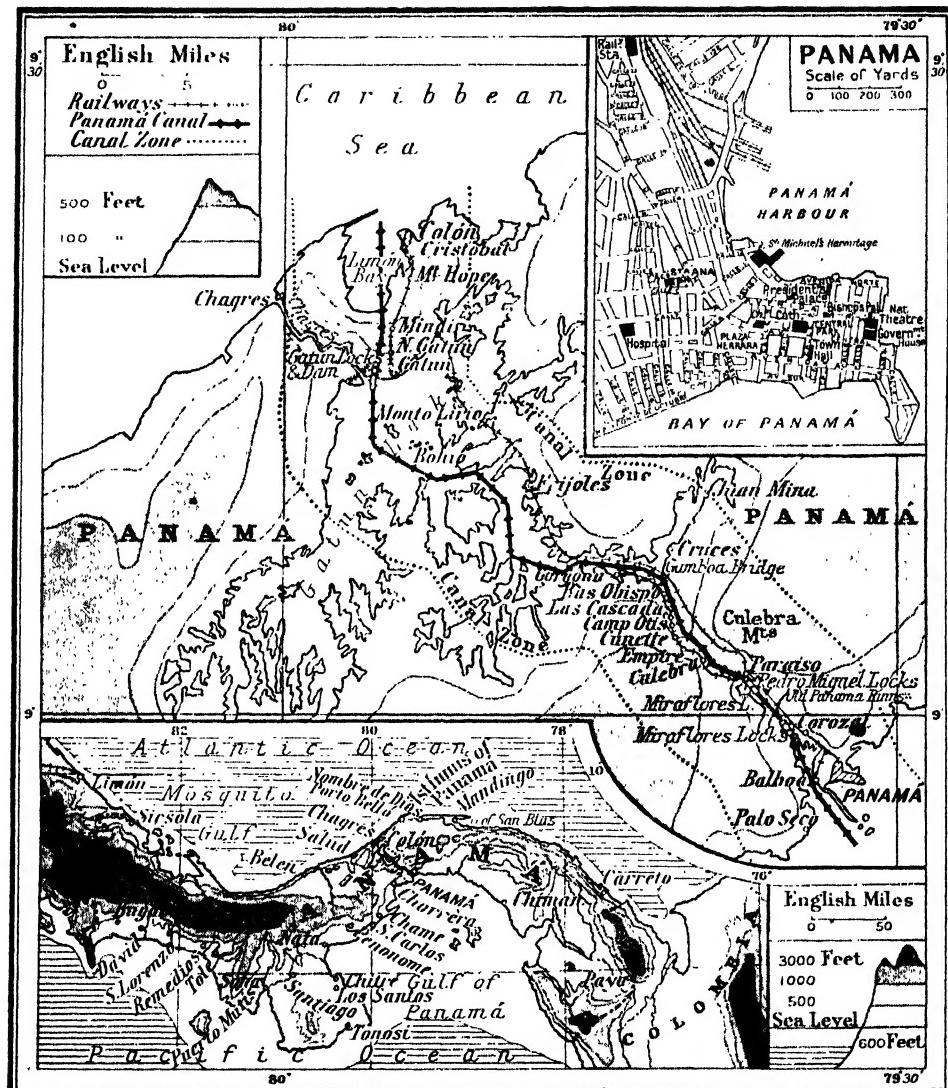
The story of its construction is a great story, not only as the record of an amazing triumph of engineering, but as a narrative of the deepest human interest. What hopes and fears, what defeats and discouragements did not go into its building before the issue was finally settled? Told in detail there is in its way no more moving story. But it is rather a long story, as it may well be, seeing that it stretches over some twenty years; only its salient features can be outlined here, only part of the drama unfolded.

Setting of the Mighty Drama

Consider first the stage and its setting—the position and the nature of the Isthmus of Panamá. Linking Central with South America, the Isthmus lies east and west, with the Caribbean Sea on the Atlantic side and the Gulf of Panamá on the Pacific side; its average breadth is about 70 miles, but at its narrowest it is not more than half that width.

The mountains of Costa Rica are continued by the Culebra range in Panamá, but in the heart of the Isthmus this range has a low saddle, under 300 feet, between mountains 3,000 feet high, and thus affords a comparatively easy route from coast to coast. This pass was utilised by a railway which ran from Colón, on the Caribbean, to Panamá city, on the Pacific, before the canal was built, and it still runs. The other chief natural feature of the Isthmus is the river Chagres—and thereby hangs a tale that is told farther on.

As regards climate, that of the Isthmus, which lies near the equatorial belt, is tropical, with a very heavy rainfall. At Colón the annual rainfall exceeds 125 inches. Of course the climate



HOW MAN HAS MADE TWO CONTINENTS OF ONE

varies according to the elevation, but, speaking generally, the coastlands were deadly with plague, malaria and yellow fever, while a moderate or even a cool temperature could be reached by ascending the mountains. What with the heat and the moisture the fecund soil produced vegetation luxuriantly, but it also was the breeding and feeding ground of myriads of rats and uncountable millions of mosquitoes, the carriers of disease and death.

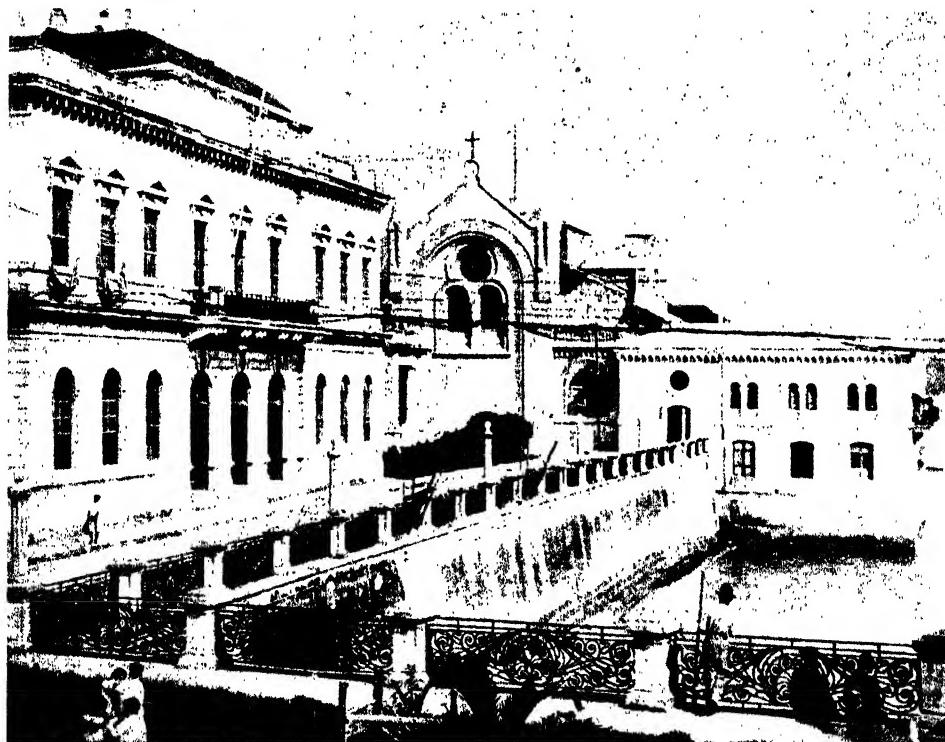
The peoples of the Isthmus were a mixture of races—Spanish, aboriginal

Indian and negro; the towns were more or less white, while the country districts were more or less coloured. Agriculture was primitive, but enormous crops of bananas provided a ready and easy means of subsistence. In any case the population was comparatively scanty and tropical conditions, there as elsewhere, did not encourage sustained effort. Up to 1903 Panamá, a term then covering the whole Isthmus as far as the much greater isthmus of Central America, was a department of Colombia, and shared its vicissitudes.

There was nothing particularly inviting about the Isthmus, but as possessing the shortest land connexion between the Atlantic and the Pacific it held within itself the one great potentiality—the canal. This had long made it supremely interesting, especially to the maritime nations, owing to the prospective shortening of some of the long sea routes. But to one nation, far more than to any other, it became of cardinal importance that this prospect should be translated into actual fact.

In 1848, as the result of a war, Mexico ceded California to the United States, whose coast-line on the Pacific was thus increased by about 1,000 miles, and no American could fail to see that the sea-distance, say, between New York and San Francisco, would be about halved if vessels, instead of having to go round the Horn, could make successful use of a canal across the Isthmus.

Some twenty years after California had been added to the United States, Ferdinand de Lesseps, after fifteen years of hard struggle, succeeded in completing the Suez Canal, and this had the effect of strengthening the idea of the construction of a canal across the Isthmus of Panamá. In 1878 a concession was obtained from the government of Colombia, and in the following year de Lesseps himself, having procured this concession from its original holder, began building the Panamá Canal from Colón to Panamá; but it proved a disastrous failure for himself and all concerned. Financial extravagance and corruption were not the only causes; the insanitary state of the Isthmus, with an enormous death-roll, told heavily against his success. Work under the de Lesseps scheme was abandoned in 1889, but the idea was not dead. The United States took it up.



IN THE PLEASANT CAPITAL OF THE REPUBLIC OF PANAMA

Panamá city lies on and extends north and west from a small boot-shaped peninsula at the head of the Gulf of Panamá. Well-paved, with modern sanitary systems, it is an exemplary tropical city. Several interesting buildings line the irregular coast; that on the left is part of the handsome pile standing at the Avenida Central's lower end and including the National Theatre

Ewing Galloway



Ewing Galloway

OLD PANAMA'S RUINED SANCTUARY

Little mercy was shown when the pirate Morgan sacked the old town of Panamá in 1671, and this crumbling tower, whose gaping wounds kindly nature endeavours to conceal, is the only remaining fragment of the once stately cathedral.

As the chief maritime power Great Britain had taken a deep interest in the Panamá Canal, and for a time there was considerable rivalry between the British and the Americans with respect to it, but in 1901, the Hay-Pauncefote treaty settled the controversy. The United States was given the right to construct a canal in a suitable part of Central America, subject to the condition that the canal should be used on equal terms by ships of all nations.

An alternative route for a canal to connect the two oceans was across Nicaragua, and it was considered by the Americans who, however, in the end decided against it.

In 1902 negotiations were begun by the United States with the French company, whose concession was still alive, and with the Colombian government. The French company's rights and property were to be bought out for forty million dollars—there was no trouble there; but, though offered good terms, Colombia declined to accept them. Finally the matter was simplified by the secession of the department of Panamá from Colombia, after a miniature revolution, and its conversion into an independent sovereign state, promptly recognized by the United States and the other Great Powers.

November 28, 1903, saw the decisive step. On that memorable day the United States and the new republic of Panamá concluded a treaty, the principal terms of which were the guaranteeing of the maintenance of the Republic of Panamá by the United States;

the granting by Panamá to the United States in perpetuity of a strip of land, across the Isthmus, five miles in extent on each side of the canal, the cities of Colón and Panamá excepted; and the cession to the United States by Panamá of all railway and canal rights within this area—which was henceforward to be known as the Canal Zone.

The U.S.A., furthermore, was given the right to fortify the zone, to have sanitary jurisdiction over the cities of Panamá and Colón, and to preserve order in them. In return the United States agreed to pay (and did pay) ten million dollars to Panamá at once, and an annual rent of a quarter of a million



TWIN TOWERS OF PANAMA CATHEDRAL IN THE PLAZA BOLIVAR

Facing the Plaza Bolívar which is traversed by the Avenida Central stands the cathedral with its two towers on either side and statues of various saints in niches over the main entrance. The edifice was built in 1760 and the domes are inlaid with mother-of-pearl. Facing the square are several public buildings and the episcopal palace. The population of Panamá is about 70,000



CITY OF PANAMA: LOOKING EAST DOWN THE AVENIDA CENTRAL

Most of the main streets of Panamá run north and south and are cut by the Avenida Central which is one of the main thoroughfares. The construction of the canal and the efforts of the Americans in providing modern sanitation have wrought wonders with the town. Nearly all the houses are of stone with balconies at each storey. The rooms above the shops are generally used as private dwellings

dollars, to commence in November, 1912. The American government took formal control of the French company's property and of the zone, and immediately the Isthmian Canal Commission was appointed to carry through the construction of the canal. That was in the spring of 1904. The next two years were devoted to preparatory and exploratory work.

The first thing the Americans did was to attack and solve the sanitary problem—which had had so large a share in the defeat of de Lesseps. In this effort they had the advantage of the experience they had gained in dealing with a somewhat similar problem in Cuba. What they did was to destroy the mosquitoes and other pests that carried disease, and they achieved this to perfection by clearing the low lands, draining and filling up the swamps and pools, and a general sanitation of the most thorough kind of the zone, as well as of the cities of Panamá and Colón, including the installation throughout the zone of a supply of pure water in unlimited quantity.

One question remained to be settled, and it was one of the greatest importance: was the canal to be a sea-level one, like the Suez Canal, and as de Lesseps had also intended it to be, or was it to be a waterway with locks? The American government appointed a board of consulting engineers, 13 in number; eight voted for a sea-level canal, five favoured a lock canal. Curiously enough it was the minority report that carried the day, and the consensus of opinion has been that this was quite right.

The decision involved two things: the making of huge locks, and the excavation of nine miles of solid rock to the required depth and width. A third thing, however, was necessary, and this was the creation of a lake or body of water between the locks at a height of 85 feet above sea-level, as provided by the minority report.

One of the reasons given by the report was the frightful floods that were a feature of the river Chagres, which, it was known, had risen as much as 25 feet

in 24 hours ; and as the river repeatedly crossed the route of the canal, it would be in constant danger. To remedy this serious trouble, the Americans built at Gatún a huge dam, one and a half miles long, 105 feet high and with a width of about 388 feet at what would be the normal water level and 100 feet at the top, which impounded the waters of the Chagres and turned them into a lake, called Gatún Lake, having an area of 163 square miles, and holding two hundred thousand million cubic feet of water.

Perhaps the best way for the reader to visualise the Panamá Canal is to describe for him a journey through it from the Caribbean to the gulf, that is, from Colón to Panamá city. We may suppose the case of a passenger, perhaps, on board a Grace liner from New York, on his way to Lima. Having crossed the Caribbean, his ship enters Limón Bay, on one side of which stands Colón, the approach to the canal being protected by two immense stone break-

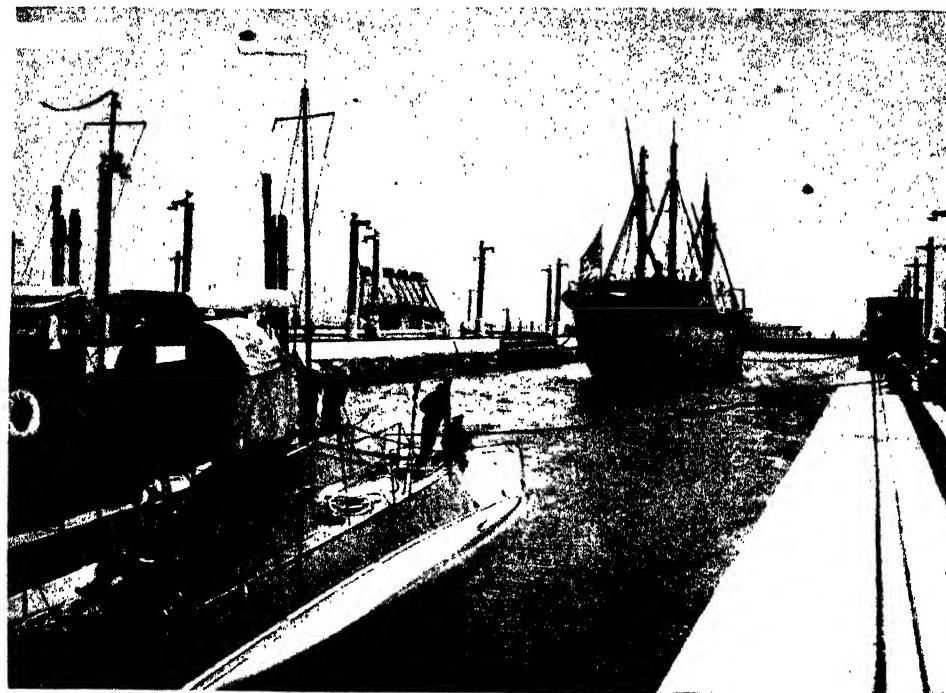
waters. Passing between these the vessel moves into a very large dock of concrete in Colón harbour ; for about seven miles it has steamed through a dredged channel, which is the real start of the canal on that side.

Now comes a series of three pairs of locks called the Gatún Locks, which are the largest and most interesting in the world. Their concrete walls are 50 feet thick at the bottom and eight at the top, and the middle wall separating the set of three twin locks is 80 feet thick and 81 feet high. Their steel gates are seven feet thick, 55 feet wide, 47 to 82 feet high, and weigh from 390 to 730 tons each. Our traveller's ship is not allowed to proceed under its own power but is pulled along into and out of the locks by electric traction cars on both sides, working on cogs in the centre of their track. The water which makes the locks available comes down from Gatún Lake above. The locks have a total length of about two-thirds



ANCIENT SPANISH BRIDGE BRUISED BY TIME'S ONSLAUGHTS

Many relics of the Spanish regime destroyed by pirate Morgan are extant in the vicinity of Panamá city. Ruins of bridges, houses and churches still bespeak that other and older city which flourished before the raiders laid it low. But the great buccaneer could create as well as destroy and that same eventful year, 1671, saw the foundation of new Panamá, the modern metropolis of the republic.

**OPERATION OF GATUN LOCKS: VESSELS WAITING TO BE LOWERED**

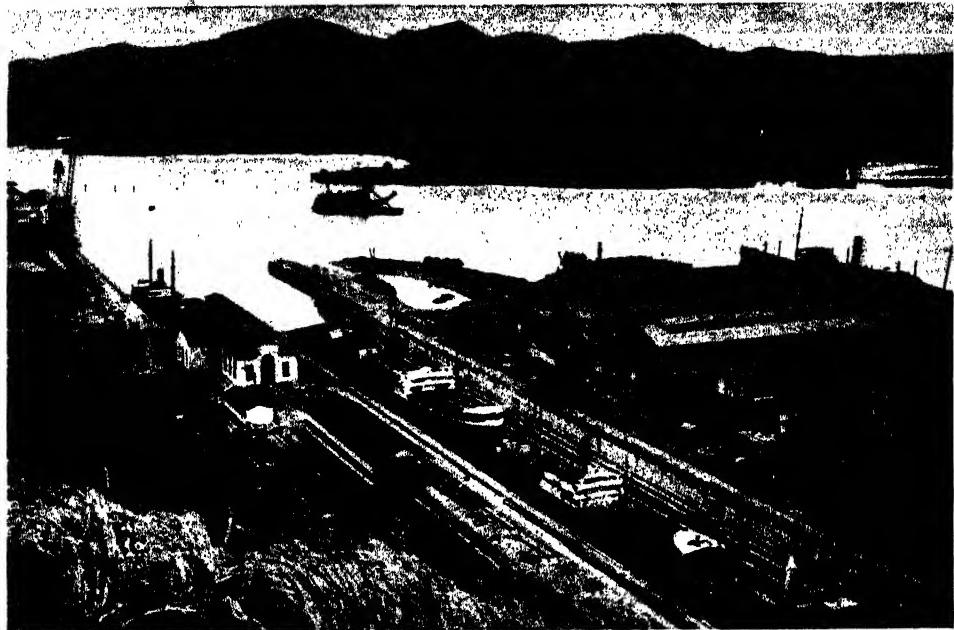
About eight miles from the entrance to its dredged channel in the Caribbean Sea, the first locks of the Panamá Canal are reached. They are the Gatún Locks which, comprising a stupendous three-stepped, double-flighted stairway, raise ships to the surface of the Gatún Lake. They are 1,000 feet long and 300 feet wide, and vessels are towed into and through them by means of electrically-driven tractors



Christy & Moore, Ltd.

BANKS OF THE CHAGRES RIVER UNDERMINED BY THE FLOODS

Near the Caribbean outlet of the Chagres river a huge earthwork called the Gatún Dam was constructed and another dam at Gamboa. Behind these dams the waters formed a lake 164 square miles in extent and 85 feet above sea-level. The river is subject to serious floods, the water rising as much as 25 feet in 24 hours. These floods have scoured out the limestone banks in many places



Ewing Galloway

BALBOA WHARVES AND DRY DOCK AT THE CANAL'S PACIFIC END

Balboa owes its existence to the opening of the Panamá Canal and lies at its Pacific extremity. The actual harbour affords no anchorage room, but is excellently equipped with extensive wharves, alongside which ships are moored, docks, warehouses, floating cranes, coaling plant and oil tanks. The dry dock, in which three vessels are here seen, is 1,000 feet long and 29 feet deep at mean low water

**SHIPS IN THE FAMOUS CULEBRA CUT OF THE PANAMA CANAL**

At Gamboa the canal passes into a great artificial gorge known as the Culebra Cut which encloses the waterway for eight miles until it reaches the Pedro Miguel Lock, where the vessels are lowered into the small Miraflores Lake. The great cutting presented almost insurmountable difficulties owing to landslides and was finally made 2,000 feet wide, the minimum width of the canal being 300 feet

of a mile, and are 300 feet wide; each can be filled and emptied in the space of about eight minutes.

Emerging from the locks the ship now enters the Gatún Lake, 85 feet above sea-level, and under her own steam goes on for 24 miles to Bas Obispo, the beginning of the famous Culebra or Gaillard Cut, the nine miles of excavated

to despair by the perpetual sinking in of the sides of the cut. At the end of the cut the ship passes into the Pedro Miguel Locks, and is lowered 30 feet to the artificial Miraflores Lake, which is about two miles square. Next the vessel goes 55 feet "downstairs" through the Miraflores Locks, by two sets of locks, to the sea-level channel on the



FRONT STREET AT COLON, SEAPORT TOWN OF PANAMA

Colón stands on the Caribbean Sea and has great importance as the Atlantic terminus of the Panamá Canal and railway. Owing to its torrid climate, heavy rainfall and situation among mangrove swamps, it was once a hotbed of yellow fever and known as the "White Man's Grave," but it has been wonderfully improved and its well-equipped harbour carries on a flourishing trade

canal referred to in a preceding paragraph. It was in cutting out this water-path across the saddle of the Culebras that the most serious difficulties were encountered. These were owing to slides and, breaks, the one from the sides, the other from the bottom of the rocky material, of which the terrain here consists, and much of which is soft. It was heart-breaking work, but the Americans won.

In the cut the ship's speed is much reduced, as in places the channel is only 300 feet wide, though at one point, known as the Curacha Slide, it is 2,000 feet wide—which means that it was here that the engineers were well-nigh driven

Pacific side, whose distance is just eight miles to deep water.

It takes about three hours to pass through the locks alone, and from ten to twelve hours for the whole trip, according to the size of the vessel and its rate of speed. The total length of the canal from deep water in the Caribbean to deep water in the Pacific is 50 miles; from shore line to shore line it is ten miles less. As originally planned, the total excavation was put at 104 million cubic yards, not including what was done by the French, but 230 million were actually excavated.

It is said that if the excavated material were placed on trucks, each of



INDIANS IN CANOES BRINGING BANANAS DOWN THE CHAGRES RIVER

Underwood
Bananas, coconuts and sugar-cane are the chief products, the majority of the banana plantations being along the Atlantic coast, while the best coconuts are grown on the coral islands and coast of the Gulf of San Blas. The production of sugar has been steadily increasing and there are over eight plantations with sugar-mills. The larger banana plantations have been developed chiefly by foreign capital



THE SIMPLE LIFE IN THE PANAMA COUNTRYSIDE

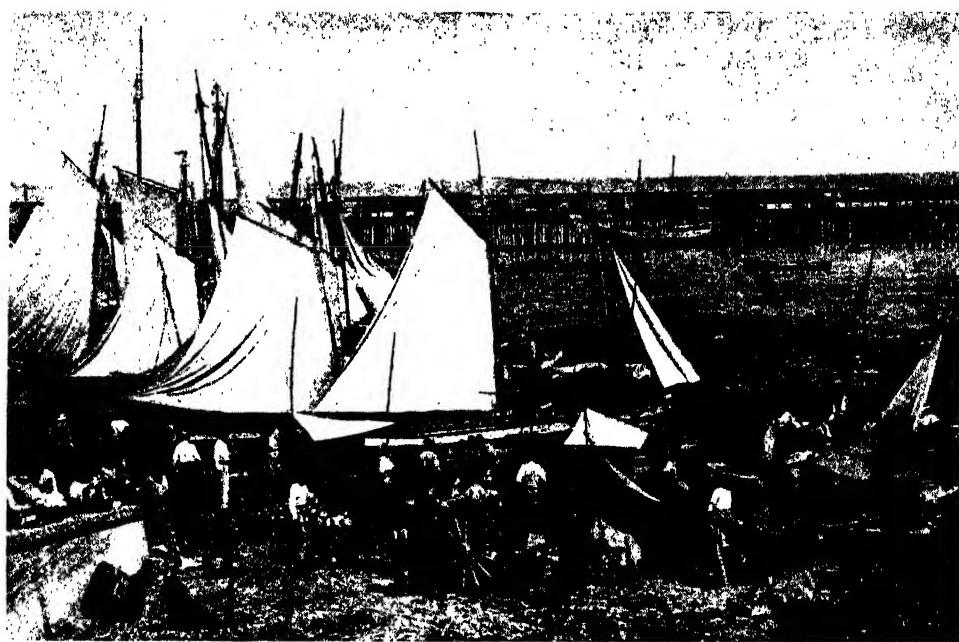
The climate of Panamá is tropical with an abundant rainfall. Extensive forests line the slopes of the mountains, and the valleys and plains provide excellent pasturage, but the rich natural resources of the country have suffered little from exploitation. The people, who include elements of Spanish, Indian and negro origin, are far from enterprising, and the countryfolk lead a primitive life.



CAREFULLY TENDED GARDEN OF A CHINESE NEAR GORGONA

Gorgona is a little town 20 miles north-west of Panamá on the Chagres river. There is not a large Chinese population in Panamá, but they have the best market gardens which are admirably kept, as opposed to the ramshackle houses hastily constructed from the nearest materials. More than half the land is unoccupied despite its promise; most of the inhabitants in the Canal Zone rear cattle.

Ewing Galloway



Ewing Galloway

FRUIT MARKET AT LOW TIDE ON THE BEACH OF PANAMA

Panamá is the chief Pacific port of the republic and the southern terminus of the Panamá railway. The harbour is good; but the tide goes out a considerable distance and a fruit and vegetable market is held on the beach at low water. Bananas, melons, pumpkins and oranges are grown with very little labour on the rich soil which tends to make the agricultural people lazy and unenterprising.



HANDIWORK OF THE OLD, BOLD MATES OF HENRY MORGAN

The site of the former city of Panamá lies some five miles, or about half an hour's motor drive by the fine concrete road, north-east of the present city. Old Panamá was founded in 1519, but was captured and ruthlessly burned and looted in 1671 by the Welsh buccaneer, Sir Henry Morgan, and his followers, during one of their many daring exploits against the Spaniards.

a capacity of twenty cubic yards, they would reach round the earth at the Equator about three and a half times. As regards the cost of the building of the canal the French and Americans between them spent on it upwards of £140,000,000, the share of the Americans being about £78,000,000."

From the above brief account much of interest has had to be omitted, but there is one point that must be mentioned. In the middle of the Gatún Dam is a spillway, which amply provides for any flooding of the Gatún Lake, and on the east side of this spillway is a large hydro-electric plant which generates all the power necessary for operating the whole of the lock machinery, as well as other machinery, throughout the entire length of the canal, and for the lighting of the locks and the zone towns and villages. And, finally, it must be noted that no other engineering project in the world has allowed such a "margin for safety," by the clever use of protective devices.

The Canal Zone has an area of about 440 square miles, and its governor, who has absolute control, is generally a senior officer of the U.S. Army. Its population is about 25,000, a considerable proportion being British West Indies negroes; Americans number about 5,000. A high tribute must be paid to the Americans, not only for the building of the canal, but also for the extraordinary efficiency and success of their administration of the whole

Canal Zone. If one steps outside into the state of Panamá, into Colón or Panamá city, one immediately sees how immense is the difference.

The state of Panamá has an area of 32,380 square miles, but its population is only some 400,000, though its soil is most fertile and would carry quite easily ten times as many people. More than half of the country is unoccupied; its one big production is the banana. It has a president and several vice-presidents; there is a governor for each of its eight provinces. And there is little more to be said of it.

Panamá city, the capital of the state, has 70,000 population, and though it has been modernised to some extent since the United States built the canal, it is still characteristically Spanish. Yet it has a number of fine buildings and a pretty residential section called Bella Vista. Its centre is the Plaza Bolívar, where is the cathedral, as well as the famous hospitals erected by the French as far back as 1881. Colón, the only other town of any size in the state, has some 27,000 people. The Canal Zone, being subject to American law, is "dry," but Colón is the precise opposite, and has the reputation of being one of the "gayest" places in the world.

But this is certainly not true of Cristobal, the American part of Colón, for order is the rule there—in its one palm-bordered boulevard, with its fine club and restaurant.

PANAMA: GEOGRAPHICAL SUMMARY

Natural Division, etc. Panamá is an artificial and recent state due to the canal. It is a tropical land, with tropical temperature and rainfall, and tropical products, of which the most useful is the banana. (Cf. Central America). The Canal Zone is noteworthy as the scene of the world's most celebrated conquest of tropical diseases, and is an example of what can be done when it is necessary to spend the requisite large capital sums in doing it.

The Canal. Like the Suez Canal, the Panamá Canal is a cut for steamship traffic between two continents and connecting two oceans. It saves steamship journeys round Cape Horn, and has

brought most ports on the west of the Americas into closer contact with New Orleans, New York, London and Hamburg. It is the shortest way to reach New Zealand from London, and this is almost the sum total of its usefulness between the major parts of the British Empire. From the British point of view its chief drawback is the absence of trading countries and great ports in close proximity to the traffic route followed by steamers passing through it; the West Indies cannot vie in this regard with the Mediterranean lands, and there is no land like India on the far side on the way to the Antipodes.

PARAGUAY

Inland Republic of South America

by William S. Barclay

Author of "The River Paraná"

PARAGUAY, which has for its immediate neighbours Brazil, Argentina and Bolivia, shares with the last-named the rare disadvantage among South American republics of possessing no ocean coast-line.

Her lack in this respect, however, is largely compensated by the moving highways of the Paraguay and Upper Paraná rivers, which respectively intersect and bound her territory. At the south-west corner of Paraguay, opposite the Argentine province of Corrientes, these two major tributaries unite in the river Paraná, "Mother of Waters," emptying after a winding course of some 740 miles into that freshwater estuary known as the River Plate.

Paraguay is thus an outpost of settlement and civilization situated far within the huge Paraná basin, whose extent is comparable with that of the Mississippi river in North America. Her bounds are washed by tributary streams which rise within 100 miles of the Brazilian coast or, on the east, descend from the snowy peaks of the distant Andes Mountains.

A Great Inland Port

This interior position of Asunción, connected by 940 miles of open river or some fifty hours of easy rail journey with Buenos Aires, gives Paraguay's capital city a peculiar strategic importance when compared with other cities and ports of South America. The only other parallel to Asunción within the continent is afforded by Manaós, in Brazil, situated 1,000 miles up the Amazon valley.

Paraguayan territory is divided into two very distinct sections. The first and most important of these is eastern

or Old Paraguay, enclosed between the Alto, or Upper, Paraná and the Paraguay rivers. Here is found the administration and practically all the population of the country. A range of central highlands, ranging from 1,000 feet to 3,000 feet, an outlier from the sandstone plateaux of Brazil, divides the land from north to south, forming the central water-parting to the two boundary rivers. The natural tropic heat of the climate is sensibly modified by this range, which finally disappears as it approaches the Argentine frontier, presenting a pleasant, broken country, whose soil alternately supports coarse pastures and scattered belts of forest.

Paraguay from the Train

The general aspect of the landscape, viewed by the traveller on the Central Railway, which crosses the end of this central range, is one of level valleys of brick-red soil, or of grass in which cattle graze belly-deep. Graceful palm groves denote the frequent presence of shallow lagoons. From the plains flat-topped hills rise abruptly, their sides clothed in green jungle where among a tangle of parasites and undergrowth a large number of valuable timbers also grow.

The second section of the country, lying across the Paraguay river and known as the Paraguayan Chaco, consists, like the adjoining Argentine and Bolivian Chaco, of nearly level plains deposited through the action of melting snow and summer rains on the Andean foothills, rising 200 miles westward as the crow flies. In striking contrast to the red earth of eastern Paraguay, this Chaco soil is composed of black humus and sand, its fertility increasing with



PARAGUAY WITH ITS RIVER BOUNDARIES

its proximity to the dividing river. The basis of work and settlement in the Chaco lies chiefly in the exploitation of its quebracho hardwoods. These, unlike the mixed jungle woods, grow in groves and are homogeneous in character, though they have a thorny undergrowth in which insect pests abound. The quebracho groves occur on slightly-raised ground, alternating with open glades of good pasture which denote the flood-areas of the streams that in the rainy season seek a confused course to the Paraguay river. Cattle-breeding, which until the introduction of the cotton plant had been practically the only other Chaco industry, tends to increase as the hardwood areas are worked out.

The total combined area of Paraguay depends on the boundary settlement which she may ultimately make with Bolivia in this same Chaco region. A local "status quo" exists by which, quite unofficially, Paraguay's northern boundary in the Chaco is usually accepted as commencing at Fort Olimpo, on the Upper Paraguay river, and running westward to join Argentine territory at latitude 22° S. Assuming

this frontier, we obtain for the whole of Paraguay an area of some 110,000 square miles.

The opinion of Paraguayans themselves, however, as to which is the best section of their country is best evidenced by the fact that of the total estimated population of 1,050,000, all but the odd 50,000, and these composed largely of Indian tribes, have their homes in the territory lying to the east of the Paraguay river.

Whether such statistics are strictly accurate or not (and statistical studies have never greatly preoccupied any Paraguayan

government), the natural advantages of eastern Paraguay, and especially of the site and surroundings of Asunción, have been recognized from the earliest days. The first European exploration of the Paraná and Paraguay rivers was made under Sebastian Cabot in 1527. Asunción was founded in 1536, its establishment thus ante-dating by 44 years the foundation of Buenos Aires, where early attempts at colonising had been frustrated by Indian raids. Up-stream, however, in a softer clime, with the docile Guarani Indians providing necessary population and labour, the viceroyalty of Paraguay flourished. Indeed, its importance was regarded in Spain as second only to that of Peru, to which Asunción formed a half-way house for any expedition starting from the Atlantic side.

During the Spanish colonial period of nearly three centuries, from 1536 to 1809, sixty-six governors came from Spain to administer the viceroyalty of Paraguay. After the Wars of Independence which were simultaneously waged throughout South America in the early nineteenth century Paraguay was proclaimed a republic, Oct. 12, 1811.

Whether on account of its exuberant climate, or the backward political status of its inhabitants, the country cannot be said to have registered much success in its new republican rôle. Its first president, Francia, from 1809, ruled the country as an absolute despot for twenty-six years. His example was followed by Dictator Lopez from 1862 to 1870, a period which included the disastrous seven years war waged under that tyrant against Argentina, Brazil and Uruguay combined. It is calculated that during the course of this unequal struggle some 450,000 Paraguayans perished, a number representing more than half the actual population of the country. Its entire manhood disappeared, leaving for years only women and children to carry on the country's work. After Lopez' death in 1870 a reformed constitution was set up which is still mainly in force.

Possibly as a result of this war and its after-effects, the pleasant-featured, soft-spoken Paraguayan women of to-day appear to cope cheerfully with tasks which in most lands fall to the opposite sex. Such tasks include not only most of the field tillage, but also the marketing of all produce. The men reserve for their share the cattle raising, timber cutting and yerba maté gathering industries, the last two tasks frequently keeping them half the year or more absent from their homesteads.

Among the many attractions open to visitors, whose numbers increase annually, special mention should be made of the "Missions" established during the colonial epoch by the patience and industry of the Jesuit missionary fathers. Seeing their original establishments in the Alto Paraná valley, above the Guayra Falls, threatened with extermination from the slave raids of the



Ewing Galloway

GLIMPSE OF DOMESTIC COUNTRY LIFE IN UNFAMILIAR PARAGUAY

Paraguay is primitive in the extreme in many of its rural districts, for the majority of the population is of Indian descent, with a slight intermixture of alien blood, and far from eager to assimilate modern ideas. Decidedly less energetic than their Argentine neighbours, the Paraguayan natives have a low standard of living; and the warm climate necessitates only scanty clothing



CATTLE RANCH AT PORT AGUIRRE, SHOWING PARAGUAY'S WOODED SLOPES BEYOND THE PARANA RIVER

Port Aguirre lies near the spot where the three countries, Argentina, Brazil and Paraguay, meet. The surrounding district is devoted to stock-raising, which was ever one of the staple industries of Paraguay, and ranks next in importance to the yerba maté or native tea industry. Both Paraguay's climate and pasture are favourable for the cattle industry, which received an impetus from the Great War, but suffered severely in the succeeding economic crisis. Since then it has made progress, chiefly owing to the importation of improved breeding stock from Argentina, and to the establishment of meat-extract and packing plants

Ewing Galloway



MISS G. BOUTTER
HIGH WOODEN CART AND BULLOCK TEAM: REPRESENTATIVES OF THE COUNTRY TRAFFIC OF PARAGUAY

The rail and road communications of Paraguay are far from satisfactory, and consequently transport is both difficult and slow. The republic boasts few railways, the chief line being known as the Paraguay Central Railway which runs from Asuncion to Encarnacion on the Upper Parana river. Most of the country roads are mere bullock tracks. Ox-carts, such as the one seen above, are in use throughout the country; the wheels are about five feet in diameter, so that the cart may traverse the numerous swamps without fear of the cargo becoming wet. These vehicles are made entirely of hardwood and their creaking can be heard for miles.

half-breed "Mamelukes" of Brazil, the Fathers organized a general exodus to the more promising lands farther south. A score of establishments in the Argentine territory of Misiones, which takes its name from them, and in Paraguay, sprung up in consequence.

Whatever were the political drawbacks of this "imperium in imperio," the material labours of the Fathers were

scattered along the Upper Paraguay river. Paraguay has only one trunk railway. This melancholy distinction it shares in South America with Ecuador and the crown colony of British Guiana. The Paraguay Central Railway was first laid in 1859, in obedience to the dictates of Francia, in order to connect Asunción with the south-west settlements, or "Missions"



Miss G. Boulter

SEPARATING CATTLE ON A PARAGUAYAN RANCH

There is abundant excellent grazing land, well suited for cattle-rearing and fattening, in Paraguay, where the government heartily encourages the development of the meat-packing and curing industry; hides and preserved beef are exported. At the end of the narrow passage, seen above, is a swing-gate between two corrals, into which the animals are driven according to age and sex.

undoubtedly of great benefit. It was they who first used and exploited the yerba maté, or Paraguayan tea (*Ilex paraguayensis*), which is still the most distinctive of all Paraguayan products. Their original orange groves have to-day expanded into great and profitable plantations. The ruins of the old mission buildings are one of the few remaining tangible evidences of Spanish colonial history. The leisurely river-steamer touches at little ports on the Alto Paraná river, where the tuneful names of San Cosmé, Villa Encarnación, Candelaria, San Ignacio, Sant' Ana and many others, recall scenes long faded from the memories of their inhabitants.

Apart from a few industrial lines serving the hardwood industries

of Paraguay. Further construction languished owing to the Seven Years War, and fifty years after this early start only an additional 60 miles of track had been built. Since September, 1913, however, a regular train service with Buenos Aires carries passengers in comfort between Asunción and that city, without even the necessity of changing cars.

This extension of the Paraguay Central Railway to the extreme south of the country terminates with a train-ferry across the Alto Paraná river to Posadas. Connexion is thereby made with the Argentine lines in Corrientes and Entre Ríos provinces, and the train runs on to a second train ferry across 25 miles of the Paraná delta, and so to



Royal Geographical Society

YOUNG PARAGUAY REARED AMID THE REPUBLIC'S UNEXPLOITED WEALTH

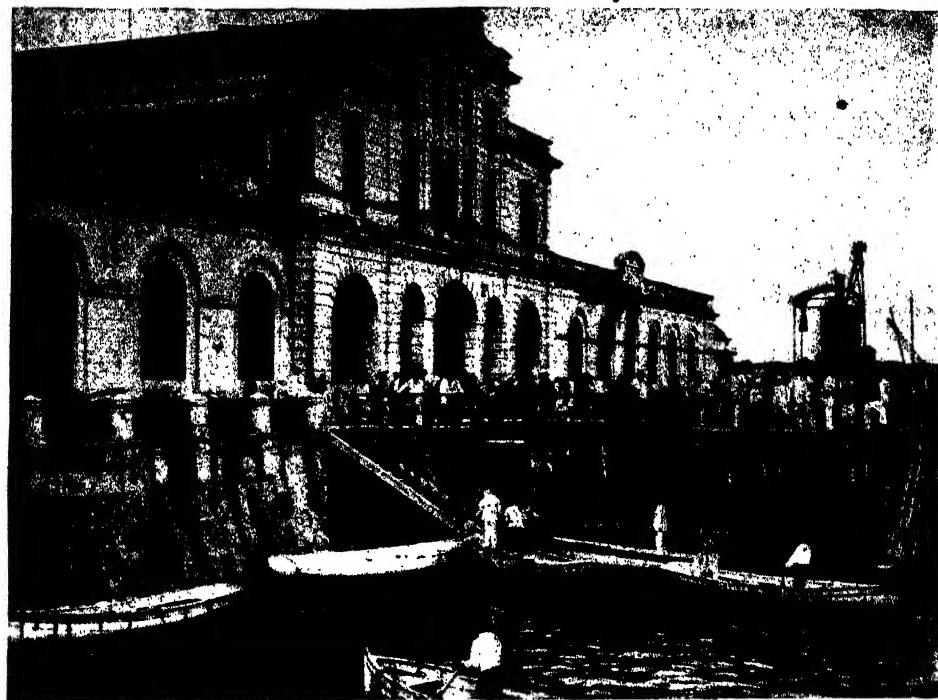
A country little known, Paraguay has often been condemned as possessing an impossible climate and being peopled by a down-trodden race. But in this small republic, set in the heart of southern South America, contrasts both of nature and people are vivid, and there are some beautiful parts where flowers and fruits grow abundantly around the trim thatched buildings of prosperous settlers



Royal Geographical Society

SQUATTER'S CLEARING ON THE UPPER REACHES OF THE PARANA

The second largest river in South America, the Paraná, has a total length of 2,500 miles. Below the great Guayra falls the river forms the boundary of Paraguay until its junction with the Paraguay river, when it flows to the River Plate. Below Posadas it is sometimes broken and rapid and offers no easy navigation although above the Guayra falls the main stream is navigable for 400 miles



Ewing Galloway

CUSTOM HOUSE ON THE RIVER FRONT AT ASUNCION

Asuncion lies on the east or left bank of the Paraguay river, an affluent of the Paraná, and has communication both by rail and steamer with Buenos Aires. As the country has no seaboard, its position at the head of navigation for sea-going vessels ensures the city considerable importance, and it has a growing trade in yerba maté, tobacco, hides, sugar, cedar and fruits.

Buenos Aires. These are the only train ferries in operation in South America. The through passenger trains between the two capitals take fifty-two hours to cover a distance of 946 miles, made without break of gauge. This schedule compares with a former average of five days by combined rail and river steamer, or seven to ten days up-stream by steamer, according to the condition of the river.

The improved train service and the attraction of the Argentine capital are diverting definitely to Buenos Aires the one-time monopoly of Paraguayan trade which Montevideo enjoyed through her early control of steamer and sailing schooner service on the Paraná river. Her dependence on Buenos Aires is strikingly illustrated by Paraguay's currency and exchange. The nominal unit is the gold peso, based on the gold content of the Argentine coin of the same value, of which \$5.04 equals £1. No gold or silver coins are in circulation.

however, the actual currency consisting of depreciated paper bills, the fluctuations of which are based on the Argentine paper dollar. Buenos Aires time has also been officially adopted on the railway and on river steamers—i.e., 4 hours and 17 minutes slow of Greenwich.

By river there is regular passenger service communication between Asuncion and Buenos Aires three times weekly, the comfortably-fitted boats engaged being chiefly those of the Argentine Navigation Co., Ltd., a British company. Both the Paraná and Paraguay rivers are navigable from the River Plate as far as Asuncion for vessels of 9 feet for at least ten months each year. Smaller craft drawing 2½ feet to 6 feet ply on the Upper Paraguay as far as the Brazilian port of Corumba, some 500 miles farther up-stream. The Upper Paraná river along the south-eastern shore of Paraguay is, on the other hand, cut by reefs and rapids a short distance

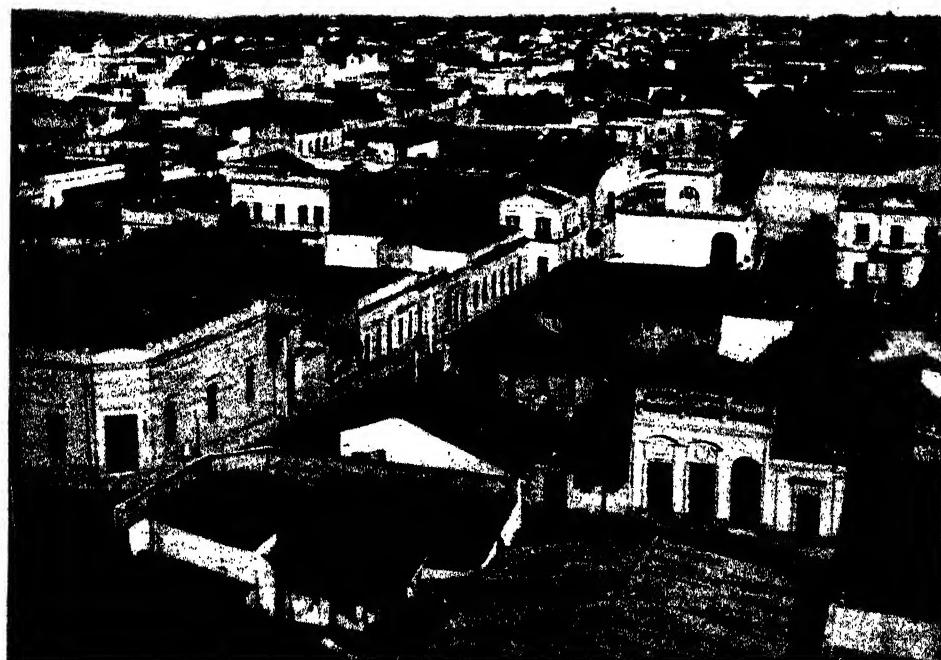
below the train ferry, limiting the draught for vessels to three feet only. Above Posadas, however, for 360 miles, there is ample clearance for vessels drawing 10 feet. This trip is much patronised by tourists to the beautiful Iguassu falls, situated near the entry of that tributary to the Alto Paraná. If time permits, a farther journey well worth while can be made to the magnificent Guayra falls, which occur in the great river itself on the extreme north-east boundary with Brazil.

Arriving by water, the port of Asunción where the paddle steamer lands the visitor, after the formal visit of the Captain of the Port, amid much blowing of whistles and the noisy solicitations of dark-skinned boatmen, presents a striking and animated scene. The white graceful "palacio" built by the tyrant Lopez, now used as the Government House, dominates the port, set in a long colonnade on the brow of an

overhanging bluff. Within the picturesque bend of the river which serves as a natural harbour, sailing schooners and boats are the rule, but of late many motor launches indicate that even on the Paraguay river time has some value.

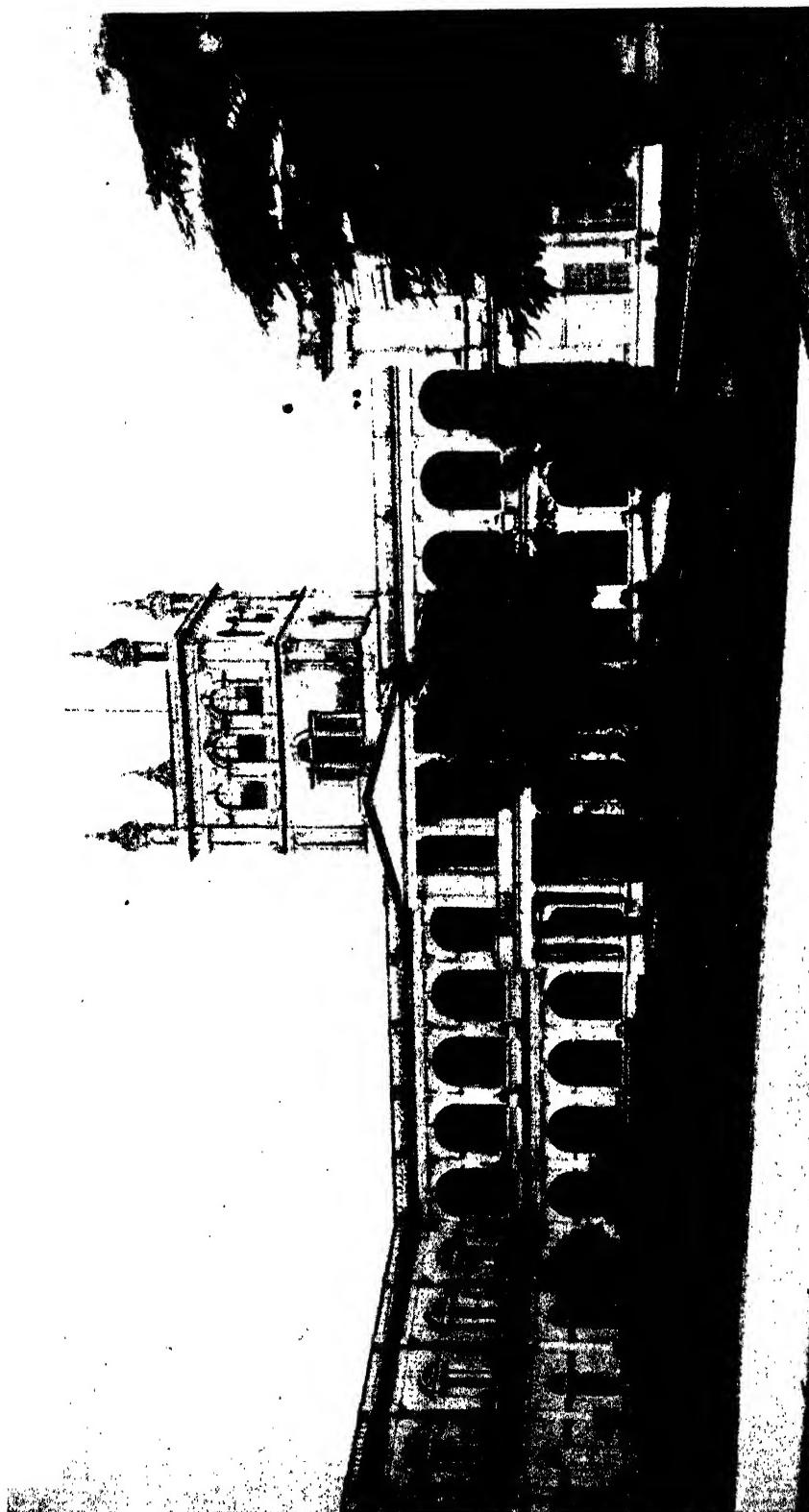
Since the railway stops short at Asunción, all communication with the hardwood workings, or colonies situated up-stream on the banks of the Paraguay, are forced to use its broad surface. Here are seen floating down cedar rafts laden with quebracho, finest of timber for lasting construction or railway sleepers, but so heavy that it sinks in water like a stone. Misshapen quebracho logs go to local mills, where they are broken up for their tanning extract, which plays an increasing rôle in the leather trade, about 30,000 tons being shipped abroad annually.

After cattle, however, tobacco is one of Paraguay's chief sources of revenue. The leaf grown, though not of Havana



Ewing Galloway.

OVERLOOKING THE LOW, WHITE HOUSES OF PARAGUAY'S METROPOLIS
Occupying a sandy plain nearly 250 feet above sea-level, Asunción overlooks the river Paraguay and the well-wooded Chaco region beyond. Despite the heat, the climate is healthy, but the town, which is of very attractive appearance, lacks many modern conveniences; there is no public water service, drainage or gas, though electric current is available at a moderate charge



Ewing Galloway

COLONNADED CAPITOL OF ASUNCION, RIVER PORT AND CAPITAL CITY OF THE REPUBLIC OF PARAGUAY
Asuncion has several buildings of considerable architectural merit, among which are the Government Palace, the Palace of Congress, the imposing pile of the Bank of Paraguay, the university, the national college and library, a hospital, the cathedral (for Asuncion is the seat of a bishopric) and a large number of other religious structures, which recall the severe struggles that took place between the Jesuits and the Church. It has important industries, including sugar refineries, cotton and woollen mills, tanneries and distilleries. The population is estimated at over 75,000, and the chief language is Spanish.



Ewing Galloway

TOMB OF LOPEZ, ERSTWHILE DICTATOR OF PARAGUAY, AT ASUNCION

Founded on Assumption Day in 1536, hence its name, Asunción has experienced many vicissitudes; it was severely plundered by the Brazilians in 1869 and subjected to blockade in 1905. Francisco Solano López, an early national hero of Paraguay, was commander-in-chief of the Paraguayan army, and from 1862 to 1870, when he was killed by the victorious Brazilians, he ruled as dictator.

quality, is well received, and over 1,000 tons are used, chiefly by the factories which supply Argentina's smokers with their countless packets of cigarettes. Most Paraguayans also grow their own patch of tobacco for home consumption. The Paraguayan woman enjoys the fragrant weed, usually in the shape of a long thin cigar, with as much apparent gusto as her menkind. Another native industry is the growing of sugar-cane, and there are small mills at various points to meet the local needs.

Yerba maté, or Paraguayan tea, practically completes the short list of the Paraguayan housewife's home-grown necessities, being used by high and low throughout the land. It is claimed for the aromatic, though bitter, infusion made from the yerba maté that it stimulates in an equal measure as tea or coffee, but without the deleterious effects of either. Be that as it may,

little else is drunk in Paraguay, and 10,000 tons of prepared yerba are yearly exported, of which the River Plate markets take about half while the rest go to Chile.

Maize, mandioca, beans and all the common vegetables flourish and are to be seen in the gardens surrounding the humble mud rancho of the worker, or the more pretentious stucco and brick houses of the well-to-do. A little rice is also grown, but more is imported. The soil and climate of the Chaco have proved themselves well adapted for cotton, which culture has much extended of late, owing to the steady demand, both locally and from Argentine spinning-mills.

Finally, mention should not be omitted of the Paraguayan orange industry. Starting with shipments merely surplus to local needs, there are now about three-quarters of a million

trees in regular plantation. The San José scale insect and other pests, which afflict the citrus fruit industry in California, have lately made their appearance in Paraguay, but their ravages have so far been insignificant, possibly owing to other counter-checks imposed locally by nature.

At the same time there is ample room for more intelligent growing and handling of the fruit. The Paraguayan Central Railway is cooperating to bring this about, and in the harvest season express orange trains running direct to Buenos Aires replace the wasteful, albeit picturesque, method of piling the loose fruit on the upper decks of down-river steamers.

Work on a plantation or in the forest has a special attraction for the Paraguayan labourer, possibly on account of the admixture of Indian strain in his blood. If Paraguay is to turn to account the bulk of her broad and sunny acres, however, resource must be had to cattle raising. The native herds are estimated at a total of $5\frac{1}{2}$ million head. Owing to the coarser herbage of the tropics and the risk of loss through tick fever, to which imported pedigree stock is especially exposed, Paraguayan herds are of inferior quality to those supplying the frozen meat trade from the River Plate. Nevertheless, these long-horned Paraguayan cattle are of fair average quality, and especially adapted for use in the jerked beef and meat extract

factories, of which latter the establishments owned by the Liebig Co. in Paraguay are the most notable.

The social life of Asunción falls far short of the standard of cosmopolitan luxury set by Buenos Aires or even Montevideo. Life in Paraguay is more easy-going; social circles are smaller and more intimate than would be the case in a less isolated community. Yet everyone who has either lived in or visited this land of orange groves bears testimony to the kindly hospitality and many amenities which are freely offered by all classes, whether in the capital, in the country, or in its small rural towns.

When the heat of the day has died down and the evening sun is low, girls dressed in the immaculate white which is the favourite colour of Paraguay stroll arm in arm in the plaza, exchanging side-glances with their swains. From side streets comes the laughter of boys as they kick a football along the dusty, red soil—for football has of late years acquired the foremost place among the games of these bare-toed urchins.

The tinkle of a guitar from some flower-decked patio hidden behind its whitewashed walls is interrupted by the blare of the local band tuning up for the nightly programme. Insects hum and sputter as they bump into the infrequent electric or kerosene lamp. Savoury smells arise from many stewpots.

The business of the day is over and the real life of Paraguay begins.

PARAGUAY: GEOGRAPHICAL SUMMARY

Natural Divisions. East, an extension of the sandstone formations of the Brazil highlands, an ancient mountain mass. (Cf. Brazil.) West, an alluvial lowland, composed of detritus from the Andes, part of the great longitudinal lowland which connects the Plate and Amazon basins. (Cf. the Indo-Gangetic plain, India.)

Climate and Vegetation. Inland, subtropical temperatures with summer rainfall. (Cf. Sudan.) The lowlands are natural grass-lands, with scrub in the drier areas and trees where rain is more frequent; in the west quebracho trees in groves, in the east jungle (cf. Brazil) on the slopes.

Products. Paraguayan tea or yerba maté. Quebracho for railway sleepers or

tanning extract. Cattle on the grass-lands; the improvement of herds by crossing with Indian cattle will ultimately react on the stock. (Cf. Argentina.) Tobacco, cane sugar, cotton (cf. the north-east of Argentina), oranges.

Communications. By rail from Asunción to Buenos Aires. By rivers to connect with the Plate estuary. By trail into Bolivia.

Outlook. Without a coast-line and with a scarcity of male workers, Paraguay requires men and capital before it can be brought into close contact with the rest of the world; at present it is largely dependent upon the fortunes of Buenos Aires.

PARIS

Epitome of France's History

by Arthur Lynch

Author of "Roman Philosophique," etc.

PARIS is a city of enchantment—ah, yes, but on conditions! The conditions are easy to some, impossible to others, and the personal accounts for the varied reports one hears of sojourners in the "City of Light."

Paris always seems typified by the image of a woman who refuses to yield the fascination of her smiles to those who do not appreciate her. She demands homage, she requires that you should feel her subtle power, that you should delight in her presence; then Paris will repay you in kindness tenfold.

The suitor for the favours of Paris must be a bold adventurer as well as fervent lover, for the charm of the place is not in the great "monuments," wonderful though they be, but in the thousand and one curious places and people which, in our wanderings, we may light upon as discoveries.

The wrong way, though the most usual, in which to look at Paris is to arrive in the city with one's head full of prejudices about the wickedness and frivolity of the French; then to drive direct to a large hotel on or near the boulevards; to meet there a great proportion of English and American holiday makers; to walk mainly in the quarter of the Opera, and patronise the establishments that live on visitors; or, perhaps, under the care of a rascally guide, to see a few show places of artificial horrors set up to edify tourists.

An Uninspiring "Back Door"

The first view of Paris on arriving at the Gare du Nord, for instance, is disappointing. One enters by the back door, and finds at once all the inconveniences of a great capital with none

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of the attractions. A tiresome wait at the customs after a long voyage does not predispose to appreciation, and then immediately on leaving we are plunged into dingy surroundings, mean shops, a confused medley of vehicles and foot passengers, amidst which the driver of the fiacre, or the chauffeur who has now almost entirely superseded him, swears his way along in a language which luckily sounds almost unintelligible slang.

Misconceptions of the Capital

My own first experience of Paris was in this quarter, and as I had been taught that the French capital was a sort of Aladdin's palace, inhabited by graceful but deplorably light ladies and little dancing-masters of men noted for having made cookery a fine art, I was surprised to find in an uninviting restaurant the head waiter with the look of a pirate and the body of a wrestler out of training, who, by way of "ros-bif," brought me an unduly raw block of—as I now believe—horse-flesh. In Romain Rolland's famous story, "Jean Christophe," will be found the disconcerting impressions of a young visitor on entering this famous city.

After a preliminary survey, it is well to get a good map of Paris, and look upon this not as a dry document but a wonder page that gives the clue to volumes of history, romance and poetry, as well as ten thousand graphic touches of real life. In this map the Seine is a striking object, for it divides the city into two parts which have always manifested real differences of character. The Rive gauche, left bank, of the Seine contains the Latin Quarter, that is to say, the district of the university and other great schools of learning, in which



Aerofilm

POPULOUS DISTRICT OF MONTMARTRE FROM THE AIR, SHOWING THE BEAUTIFUL, WHITE STONE BASILICA

The northern portion of the city of Paris rises rather steeply to a height of some 400 feet. Here is Montmartre, a thickly-populated district built on the hill, with its steep and narrow streets in which are situated numerous cabarets and cafés, run mostly for the sole benefit of unsuspecting foreigners. On the summit of the distant hill rises the immense Easter-looking Basilique du Sacré-Cœur; begun in 1875, the church was used for service from 1891, but not consecrated as a basilica until 1919. In the foreground on the extreme right we have a glimpse of the Opera House, on the extreme left of the Gare St. Lazare.



BEAUTIFUL PARIS FROM AN AERIAL POINT OF VIEW

In the foreground, north of the Pont de la Concorde which spans the Seine, the Place de la Concorde, with its central feature the 75-foot obelisk of Luxor, lies between the lovely Tuilleries Gardens on the east and the luxuriantly wooded Champs Elysées, traversed by the famous avenue, on the west.

From the square, one of the world's largest, the Rue Royale leads to the Madeleine.

the bulk of the inhabitants were at one time students. I say "at one time" advisedly, for Paris is in process of change in the sense of losing some of its old individuality; the whole city is becoming "embourgeoisée" and conventionalised, and the distinctive characteristics of the students themselves are being merged in the general crowd of the inhabitants.

A walk along the Boulevard St. Michel, the celebrated "Boul' Miché", while the University is in session will make all this clearer, and as the Latin Quarter is within easy reach of any part of Paris, a visit here should be one of the first cares of the student of the city.

Those who have read Victor Hugo's "Les Misérables" or Murger's "La Vie de Bohème" will gain some inkling of the conditions of life in the Latin Quarter of the old days, but it has now become modified in the sense of greater seriousness and less picturesque display.

Here, as we walk from the Seine southward, we will find students in plenty, and numbers of young women, but the race of the "grisettes"—the young workgirls who formed attachments with the scholars during their stay at the University—has gradually died out, and given way to the no less charming but more intelligent and independent "midinette" of to-day.

Here, at the corner of the Rue Cujas, for example, is now a Comptoir d'Escompte, though formerly it was a bright little restaurant where one could get an excellent lunch, with wine, for the equivalent of a shilling or, by taking cachets (tickets), thirteen—lucky number in this case!—for the usual price of a dozen.

A little farther south, where now a commonplace railway station stands, was a restaurant known to students as the Café Rouge, not for any connection with Bolshevism, but because a band in

red uniform used to discourse music there while students enjoyed each other's company, or occasionally that of the other sex, and volatile artists, not yet hung on the line, discoursed fervently of the latest theories and laughed heartily at the celebrities.

A little farther on is the Bal Bullier, which was once a students' dancing hall and full of gaiety and brio. It is now

Here let me say that all Paris is a great museum, and that the finest masterpieces of the modern world are to be found not within four walls, but exposed in the open. Artists themselves have selected as the best the group of Rude, entitled "Le Départ," which adorns the Arc de Triomphe, the group of the Dance which figures on the eastern side of the façade of the Opéra,



Ewing Galloway

FASHIONABLE PARISIAN INSTITUTION: THE FAMOUS OPERA HOUSE

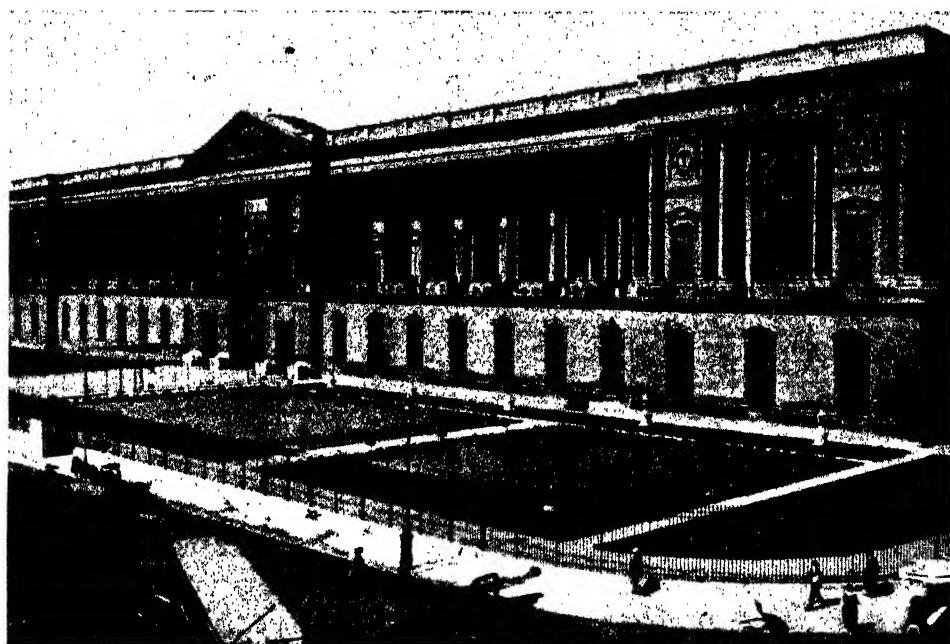
Both theatre and opera occupy an important place in Parisian life; the standard of acting is very high and the people are great lovers of music. The beautiful Opera House, erected in 1861-75, rises on the north of the Place de l'Opéra, a busy centre of traffic; a fine flight of steps gives access to the main entrance, which is magnificently decorated with sculptures and coloured marbles

to some extent a show place, and greatly patronised, not by students, but by drapers' assistants and the like; and the old spontaneous gaiety is kept artificially alive by a few "allumeuses" (lighters-up), who pretend to be joyous for a few francs the evening.

In front of the Bal Bullier is the spot where Ney was shot for having joined Napoleon in 1815, and on the opposite side of the road is the famous statue of the marshal by Rude.

and the "Penseur" of Rodin, which was formerly to be found facing the Panthéon, but now reposes in the front garden of the Rodin Museum in the Rue de Varenne.

The Rue Notre Dame des Champs is a great street for artists, and Whistler had his studio there, though later he had another in the Rue de Bac, associated of old with Madame de Staël, which forms the covered way of a little stream that used to run into the Seine.



Ewing Galloway

COLONNADED EAST FRONT OF THE OLD PALAIS DU LOUVRE

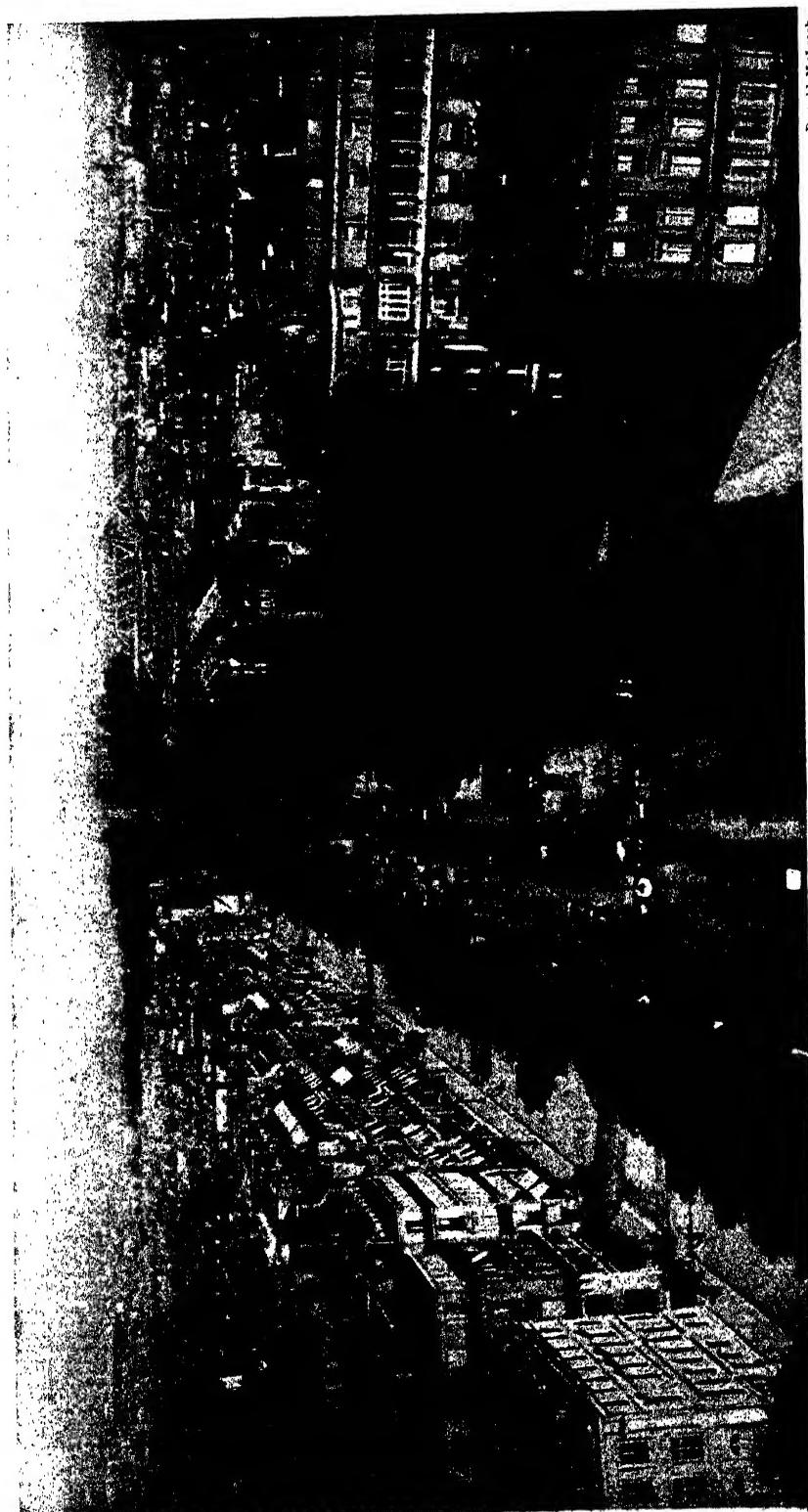
The buildings of the Louvre, the famous old palace of the French kings, now containing priceless art collections and a museum of antiquities, are divided into two parts, those of the Old and the New Louvre. The former are gathered round the Cour du Louvre, which is flanked on its eastern exterior by a beautiful colonnade consisting of 52 massive Corinthian columns and pilasters, erected in 1666-70.



Ewing Galloway

THE BOURSE OF PARIS, CAGED WITHIN ITS CORINTHIAN PERISTYLE

The French word "bourse" has become almost international in its use for an exchange, particularly a stock exchange, but the Bourse par excellence is naturally the Stock Exchange of Paris. Built in 1688-97, this handsome building, situated not far from the Palais Royal, resembles the Temple of Vespasian at Rome, and its great hall has many decorative features that merit inspection.



UNINTERRUPTED VISTA ALONG THE AVENUE DES CHAMPS ELYSEES TO THE TUILERIES GARDENS AND THE LOUVRE

This fine view obtained from the summit of the Arc de Triomphe shows the wide, straight course of the Avenue des Champs Elysees, which stretches east for about one and a half miles to the Place de la Concorde. One of the most popular and fashionable promenades in Paris, it presents during the afternoon hours in the season a most interesting sight with its long unbroken lines of motor cars and carriages, and at night, brilliantly lighted, the avenue is no less striking. Its eastern end is flanked on either side by a wooded park, while large private houses, fashionable shops and hotels line the remainder of its course.

Donald Gleish

Near Rue Notre Dame des Champs is Rue d'Assas, where Alphonse Daudet has pitched the first scene of his novel, "Sappho," and where Bouguereau, so well known particularly in America, lived and painted till well over eighty. I remember seeing him at work on his last painting, looking like an old fisherman, and while talking cheerfully transforming a rather dull little model into a

Then there are the old inhabitants of "the Quarter," some of whom pride themselves on the fact that they have never once crossed the river to visit the despised "Rive droite" (right bank).

We are now in the Senatorial quarter. A walk across the delightful Luxembourg Gardens brings us to the Senate House and to the Luxembourg Museum. It is not so easy to walk across the gardens,



Ewing Galloway

LUXEMBOURG PALACE, AN ARCHITECTURAL CLASSIC OF PARIS

This world-famous royal palace, now the meeting place of the French Senate, is situated on the left bank of the Seine in Paris. It was built in 1615-27 for Marie de' Medici, widow of Henry IV., who adorned it with many costly treasures, and in 1836 it was almost entirely remodelled. The extensive gardens, now 62 acres in area, are some of the most beautiful in the city.

wonderful nymph of the sea, while Madame Bouguereau, who was an American, sat by, and as he painted, wiped his brow with a silk handkerchief.

As we walk along we note the types: students, many of whom, but not all, wear the distinctive beret (cap); young women either very busy or very idle; artists with velvet coats, baggy corduroy trousers, long hair. Celebrities? No. The artist who has "arrived" dresses like a bourgeois; he is indistinguishable from a pork-butcher, a deputy or a general in mufti.

for here also are not only leafy paths, but statues that tell in stone a good deal of the history of France, and also of the little side paths of literature—statues of the queens, and busts of the poets, and here a slender, graceful figure, the seller of masks, who holds suspended the masks of various famous Frenchmen. The devoted visitor should not leave Paris till he has found by inquiry or research whom these little effigies represent.

Paris is the great fermenting vat of ideas, and here the artists, even those who at first appear a little disconcerting,

are working sincerely at their own fresh conceptions.

Making our way northward to the Seine, we may pass by the Odéon, the second of the great state theatres in Paris, devoted to the drama, and passing along the Rue Bonaparte, we arrive at the Institut which represents the intellect of France.

Quietude Preserved from of Old

All this quarter has preserved even through the centuries something of its old character. We are free here from the fever and fret of the grand boulevards. Once I saw, to my astonishment, a bullock team slowly drawing a wagon along the Rue Bonaparte.

This is also the quarter of the medical schools, of various museums, and of the Ecole des Beaux Arts. If we return again to the Luxembourg Gardens, and traverse the Boulevard St. Michel, we may pay a visit to the Panthéon, a beautiful building recalling S. Paul's on a small scale and, like that famous edifice, surmounting a commanding little hill. To be buried in the Panthéon is amongst the highest honours that Paris can give a citizen, and no doubt the prospect encourages the "élite" to keep that final enjoyment in view.

Grasping Parisian Topography

Next in importance to the dividing line of the river is that of the irregular semicircle of the grand boulevards, starting from the Madeleine and running to the Place de la Bastille. At the end touching the Madeleine, the Rue Royale joins on, and leads to the Place de la Concorde from which we behold the Palais Bourbon, corresponding to the English Houses of Parliament, and the splendid sweep of the Avenue des Champs Elysées.

Once one has mastered the general direction of the river, of the grand boulevards, of the Avenue of the Champs Elysées and the Arc de Triomphe at its termination, then it is easier to acquire a general sense of the place. The city has developed and changed

from century to century, and the student and lover of Paris should not fail to trace out the successive landmarks. In the reign of Philippe Auguste, for example—that is to say, in the days of Richard I. of England—the city was contained within a wall with a half a mile radius from Notre Dame. In the time of Louis XIII. and Richelieu the rampart had doubled that radius and included the Louvre, redolent of history, and now the home of the choicest collection of paintings and sculpture in the world. Louis XIV. made a further improvement in levelling the walls and substituting roads. The term boulevard is indeed associated with the English word bulwark, and a great deal of the history of Paris is crystallised in the names of streets and buildings. The old religious system, which dominated the place, is recalled by such names as the Boulevard des Capucines, the extensions of Louis XIV. having involved a Capuchin monastery.

Parisians of Fiction and Fact

The term "boulevardier" is often regarded as meaning frivolity and cynicism, but it must be remembered that Paris now harbours nearly as many strangers as there were citizens in the days of Louis XIV. The true Parisian is fond of amusement, but he is not cynical; he is prone both to enthusiasm and to scepticism and, with many cautious and prudent traits, is after all of generous and helpful disposition, a hard worker and a good friend. The theatre lies deeply in his mind, and the crises of French history can be summed up in dramatic phrases, while throughout it all runs the proverb: "Cherchez la femme"—"Find the woman."

The Parisienne, be it noted also, sacrifice as she may to the goddess of style and grace, is not at all the brainless little pâroquet that foreigners often take her for. She is intelligent, a good housekeeper, full of courage, and virtuously devoted to her home.

The semicircle included between the boulevards and the Seine forms the

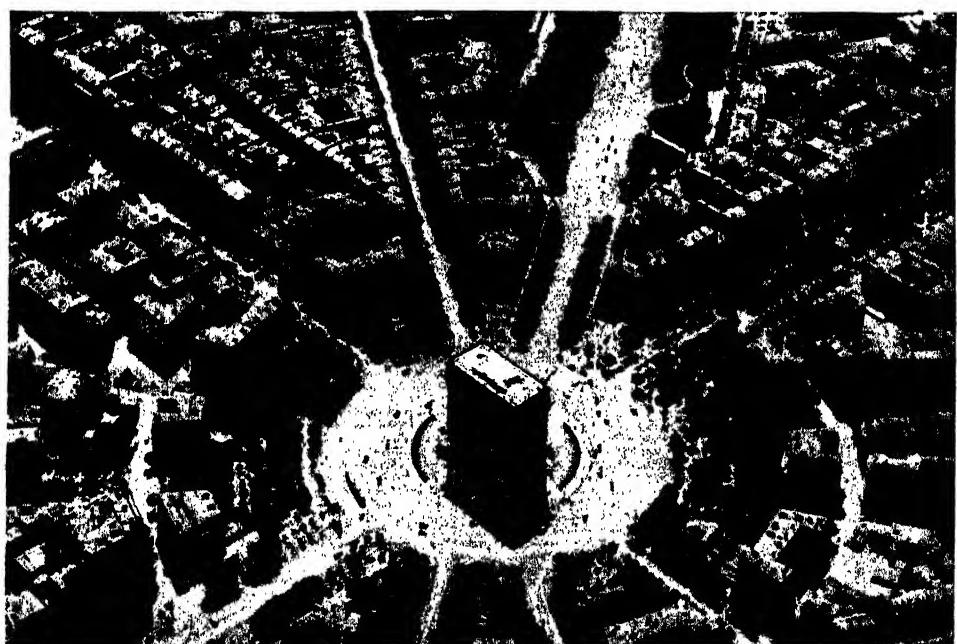


Aerofilms

HUGE STRUCTURE OF THE EIFFEL TOWER UPON THE CHAMP DE MARS

From an aeroplane the tower seems to straddle half across the Champ de Mars, where the first horse races in France took place and reviews were held. Across the Seine are the Trocadéro Palace and gardens. From the central buildings two long wings, used as museums, stretch out on either side.

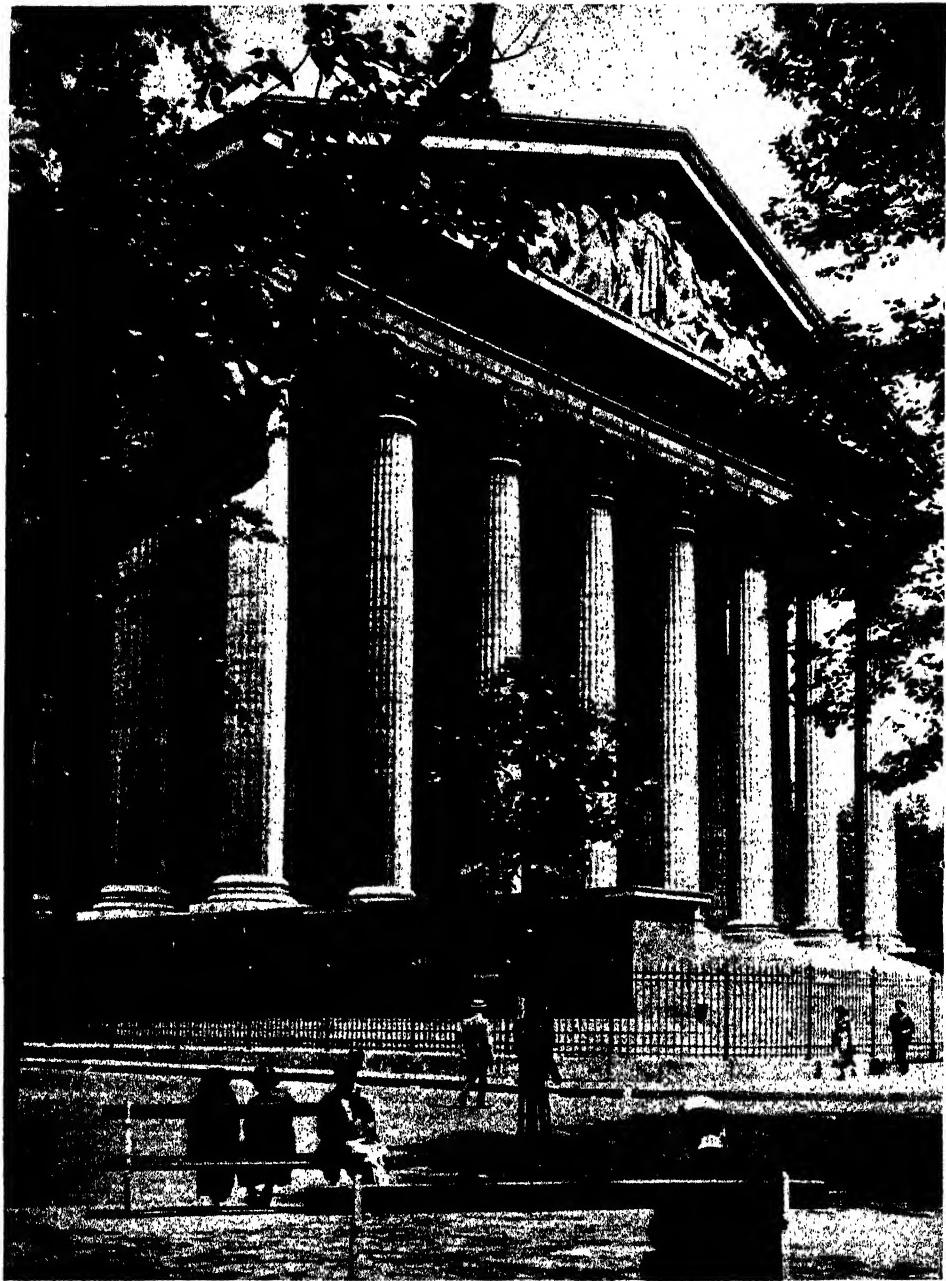
On the left of the Champ de Mars are the station and the cavalry barracks



Aerofilms

PLACE DE L'ETOILE, WHENCE TWELVE AVENUES RADIATE STARWISE

Erected on a slight eminence and visible from most quarters of Paris, the great Arc de Triomphe, begun in 1806 by Napoleon I., stands in the Place de l'Étoile. Beneath it rests the Unknown Warrior, representing France's heroic dead of 1914-18. Part of the Avenue des Champs Elysées is seen in the left foreground; opposite it, beyond the arch, is the Avenue de la Grande Armée



Donald McLeish

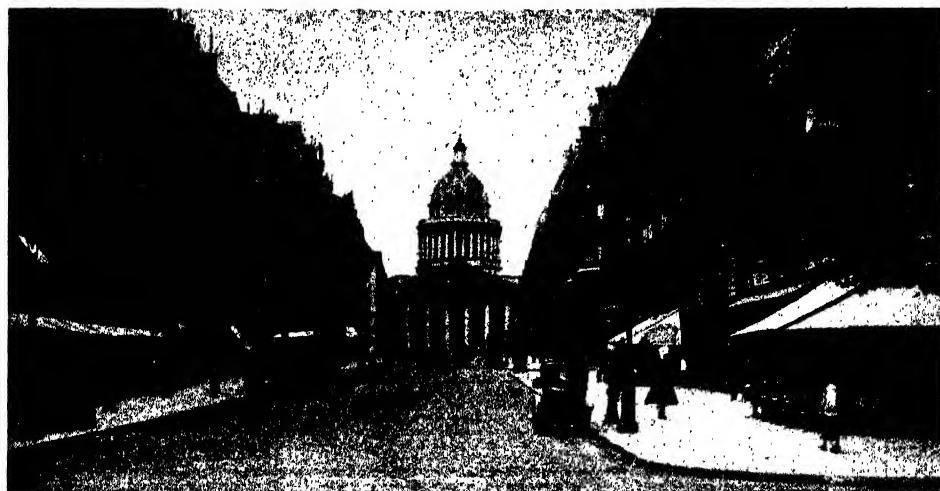
ENTRANCE TO LA MADELEINE, MOST FASHIONABLE CHURCH IN PARIS

In the centre of the Place de la Madeleine stands a magnificent sanctuary, erected in the style of a Roman temple and flanked on all sides by majestic Corinthian columns. Begun in 1764 on a former church site, it was after 1806 destined by Napoleon as a temple of glory for his "Grande Armée." Restored by royal decree to divine worship in 1816, it was completed in 1842.

great commercial part of the city, including newspaper offices and theatres and the large hotels, the tempting "magazin" and shops of all descriptions. Here also are the Halles Centrales

(Central Markets) which figure in Zola's "Le Ventre de Paris."

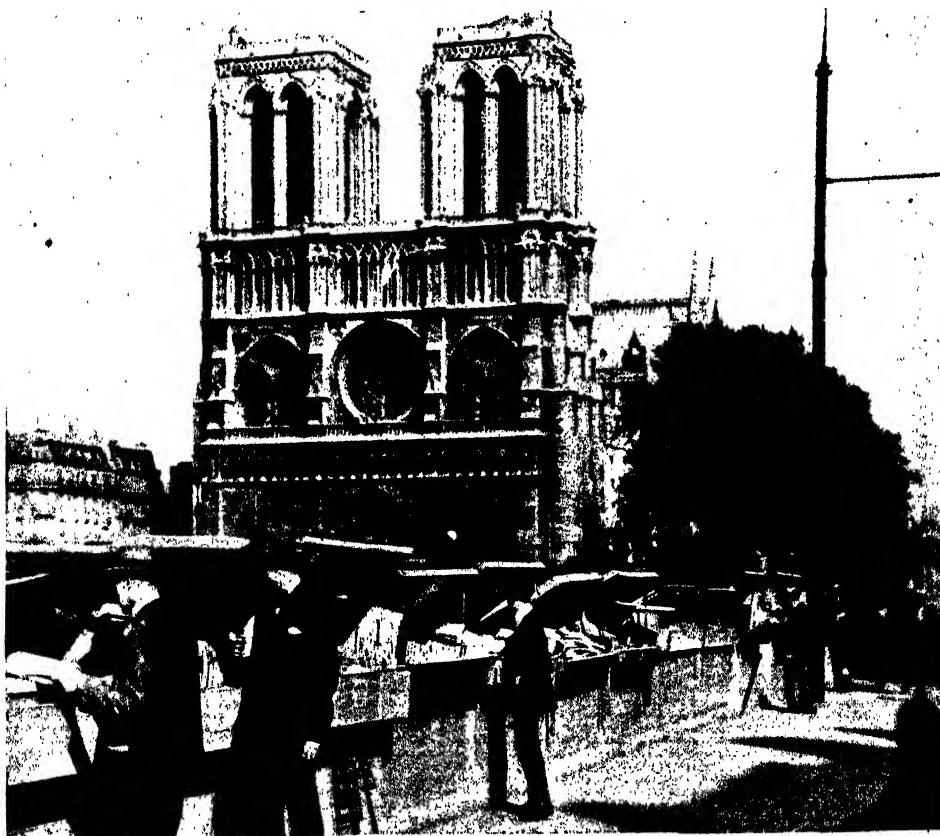
To the west are found the Palais Royal, the Théâtre Français, the magnificent perspective of the Avenue de



Ewing Galloway

LOOKING EAST TOWARDS THE PANTHEON IN THE RUE SOUFFLOT

The imposing building of the Panthéon is in the shape of a Greek Cross, and is 360 feet in length, 270 feet in width and 270 feet to the summit of its beautiful dome. After its completion in 1790 as the church of Ste. Geneviève, the patron saint of Paris, it was decided to use it as a burial-place for distinguished sons of France. It stands on the traditional site of the tomb of the saint



Ewing Galloway

STRANGE BOOKSTALLS BENEATH THE TOWERS OF NOTRE DAME

During the seventeenth and eighteenth centuries booksellers, pedlars and mountebanks gathered about the Place du Pont Neuf and the bridge itself. Now the booksellers have their stalls by Notre Dame, close to the Pont au Double. The cathedral was begun in 1163 and the two towers were completed by about 1240. The building was converted into a Temple of Reason during the year 1793-4

l'Opéra, the Opéra itself; the Rue de la Paix, the great street for all precious things such as jewels; the Place Vendôme, the Rue de Rivoli, the Gardens of the Tuileries, the remains of the Tuileries building—for a part was burnt in 1870—and then one comes back again to the Louvre.

What's in a Name?

It is necessary to be careful here, for there is a great shop, a "magazin," called the Louvre, and an American lady of my acquaintance being asked if she had visited the Louvre, replied charmingly: "Why, yes, I spent most of my day there!" Then she added, as an afterthought: "And they told me that there was another Louvre, where they had some real cute paintings!"

To the west, in the neighbourhood of the Arc de Triomphe, round the beautiful Parc Monceau, and on the other side to the Trocadéro, and embracing the Avenue du Bois de Boulogne, live the rich and leisured classes, while to the north and east are found the toiling multitudes.

The workpeople in Paris are, in the main, very intelligent, laborious, honest people; the men great politicians and, like another Celtic race, very critical of the government, especially as they sit round their little tables at their cafés discussing a roll of bread with cheese and a bottle of cheap but good wine. The women, going about their marketing bareheaded, are also intelligent and hard-working, and gifted with an innate sense of artistry.

From Vegetables to Sawmills

La Villette corresponds to Whitechapel, and Belleville and Ménilmontant to other parts of the East End of London. In the south-west, again, we have Grenelle, once the market garden of Paris, now devoted to asphalt, cordage, bricks, sawmills, and a little mild boating.

In the outer boulevards you may find—or if you have been enjoying Paris too well and too late, they may find

you—the Apaches. The Apache used to be known by his peaked cap, his corduroy trousers "sprung" at the bottom, and his red sash. Now he dresses more like a bourgeois, but he is no less ready than of old to "cool a type" with his long, sharp knife.

At Montmartre, which prides itself on being distinct from Paris, we find an artistic colony which has migrated from the Latin Quarter; also a profusion of "artistic" cabarets set up for the edification of foolish visitors.

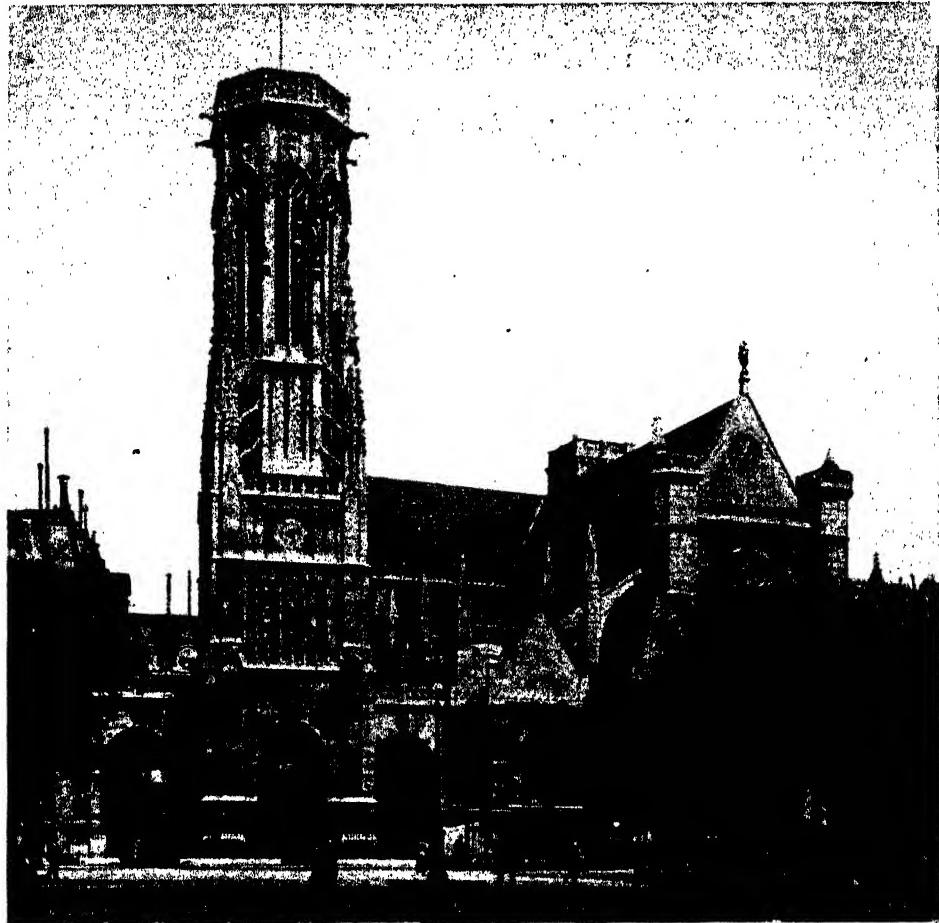
The boulevards themselves offer an endless interest, and it has been truly said that if a man were to sit on a chair at the Café de la Paix he would see the whole world, or at least that part of it which becomes notable, pass before his feet. Every café in Paris has a certain distinctive individuality. The Café Anglais and the Maison Dorée made their name in the early days of King Edward, when he was still Prince of Wales, and its chef became renowned.

Feeding as a Fine Art

Other cafés, however, have become more popular. The Café Cardinal was, and is, the resort of literary men; the Café Voisin, with its somewhat dingy exterior upon Rue St. Honoré, is known to Parisian gourmets, and especially to members of the British Embassy. A commonplace looking restaurant near the Comédie Française—Café de la Régence—is the great resort of chessmen, and Café Marguéry is known not only for its special dish, Sole à la Marguéry, but for its wines.

Dining in Paris is something more than a satisfaction of the appetite: it is an art, and it is in these cafés and similar resorts that the wit of the boulevards is cultivated, as are the choice products of the vintages of France, to the degree of excellence.

To see Paris properly, and to get behind the scenes, one should not rely upon the professional guides, but rather seek to get into the good books of some astute, worldly-minded, but withal kindly and courteous old boulevardier.



Donald McLeish

GOTHIC GRACE OF AN ANCIENT PARIS SANCTUARY

Although founded by St. Germain of Paris about 560, the present form of the church of St. Germain l'Auxerrois dates mainly from the thirteenth to the sixteenth centuries, with restorations of the nineteenth century. Within this church Molière was married and his first son baptised, and the signal for the massacre of S. Bartholomew, on that fateful August 24, 1572, was given from the bell-tower

Suppose now that having caught something of the spirit of Paris, we begin to study it more systematically. We may take an omnibus from the Madeleine to the Bastille. The Madeleine itself is an imitation of the Latinised form of the old Greek temples, but I find the Paris omnibus itself, and its passengers, more interesting than these classic copies.

Before reaching the site of the Bastille we pass the Opéra on the left; we gain to the right a glimpse of the imposing perspective of the Avenue de l'Opéra, and farther on we see the chief office of the world-wide Crédit Lyonnais and the Opéra Comique. We are in the

region of banks, and farther south, hidden from the main thoroughfare, stands the Banque de la France.

In the Rue Richelieu is the office of "Le Journal." To the north of the boulevard is that of "Le Temps"; in the Rue Drout leading north used to stand the "Figaro," but now—and the literary world of Paris felt that a little revolution had been accomplished—it graces the Rond-Point of the Champs Elysées; and fronting on the Boulevard Poissonnière stands "Le Matin."

I mention these papers, for they are the mirrors of the life of Paris. At the salons of the "Journal," the "Figaro," the "Matin" one may

encounter most of the celebrities of Europe or elsewhere, and in the "Temps" meet grave and reverend seigneurs who dispose of the destinies of the Continent—or wear that air.

As we proceed onward the Bourse lies to the south, and we pass on our left the triumphal arches set up by Louis XIV., Porte St. Denis and Porte St. Martin, to mark the site of the castellated gates of the city wall.

Memory-enchanted Ground

We pass the Boulevard Sébastopol, one of the creations of Baron Haussmann of the reign of Napoleon III., which drove a great avenue through a maze of little old tortuous streets. It was such a process of modernisation, by the way, that produced the Avenue de l'Opéra, which swept away another set of narrow streets, in one of which Henry IV. was poniarded.

We reach the Place de la République, and proceeding south by east along the Boulevard du Temple, Boulevard des Filles du Calvaire and Boulevard Beaumarchais, we arrive at the Place de la Bastille. Here we are on ground of enchantment, so rich are the memories. The Column of July, put up by Louis Philippe to commemorate the revolution of 1830, stands where once the fortress of the Bastille menaced Paris since the days of Charles V., and contained within its dungeons so much material of tragedy and romance.

A Link with Madame de Sévigné

Near by in the Rue de Sévigné stands the Carnavalet Museum, which contains a very interesting collection of objects associated with the revolutionary period. The Rue de Sévigné owes its name to the fact that Madame de Sévigné, whose letters to her daughter-in-law are so famous, once resided in the "hôtel," as private palaces were called, and thus we have a link with Camille Desmoulins, Danton, Robespierre and the rest, with Louis XIV., who considered himself the representative of God on earth, and who said that the

Creator would think twice before taking off a man of his estate.

From the Place de la Bastille we may proceed southward to the river, and so complete the semicircle of that which once constituted the Ville and which still contains most of what is interesting and important in the active life of Paris.

We are now in the most democratic quarter of the city, the Faubourg St. Antoine, the name of which occurs so often in revolutionary history. We may return by the Rue St. Antoine which presently runs into the Rue de Rivoli.

Arriving in the neighbourhood of the Hôtel de Ville, the town-hall, we may then turn south to the Ile de la Cité to examine at leisure the beauties of Notre Dame, and then near the Law Courts the once famous shrine, and now show place, of the Sainte Chapelle. This building, which is one of the most perfect specimens of its style of Gothic architecture, was erected by the orders of Louis IX.—Saint Louis—to contain the crown of thorns, as well as a piece of the true Cross, which he had purchased from Baldwin, King of Jerusalem.

Stained Glass like Jewels

The chapel inspires the enthusiasm both of the devout and of those interested in choice examples of architectural effects. Amongst its glories are the stained-glass windows which on sunny days make it glow like a gigantic and resplendent jewel.

In this same wonderful quarter, which was the core of Paris, are to be found the Préfecture of the Seine—the seat of the government of the city as a port of France, and distinguished from the municipal government which meets at the Hôtel de Ville—the Hôtel Dieu, the great Parisian hospital, and all the offices of justice and public surety.

Passing along the Rue de Rivoli westward we see on our left hand, before reaching the Louvre, the Church of St. Germain l'Auxerrois, the bells of which sounded the signal for the massacre of S. Bartholomew. We pass by the Palais Royal and the Théâtre



RESTING PLACE OF FRANCE'S GREATEST SOLDIER

The Dôme des Invalides, begun in 1675 and completed in 1735, was added to the church of St. Louis as a chapel royal. Directly beneath the huge, lead-roofed cupola, which is embellished with gilded trophies and crowned with a lantern and cross, the latter being 345 feet above the pavement, is the open crypt which contains the red granite sarcophagus of Napoleon the Great.

Français on our right, and we gain a fine view along the Avenue de l'Opéra.

The Louvre itself demands a thorough and detailed study, but it is so vast, it enshrines so much of French history in its successive developments, it contains so great a variety of treasures, that it is impossible to render it even homage in so brief a reference.

The Rue de Rivoli was built according to the ideas of Napoleon I., for being a

Corsican by birth and an Italian by origin, he loved the porticos and colonnades of his ancestral land. The Parisians have never found the Rue de Rivoli so interesting as the Grand Boulevard, and so this picturesque street is left to foreigners and shopkeepers.

The Louvre was formerly extended on its western aspect by the Tuileries, begun by Catherine de' Medici and completed by Louis XIV., but in 1871

the Communists attempted to destroy the whole building and succeeded in disposing of the Tuileries.

Proceeding along the Rue de Rivoli we meet the Rue Castiglione, which leads to the Place Vendôme, designed by Louis XIV. and adored by Napoleon I. with a great column erected to celebrate his victories. This was pulled down by the Paris mob in 1871—decidedly they disliked pompous architecture—but was subsequently restored.

Where Stood the Guillotine

Still farther west we come to the southern end of the Rue Royale, which proceeds from the Madeleine to the Place de la Concorde, and so on this side completes the semicircle of the boulevards to the river. The Place de la Concorde is a fine open square, and is memorable also as the site where the revolutionary guillotine worked.

By a bridge we proceed to the Palais Bourbon, and beyond this to the west is the home of the Foreign Office, in the Quai d'Orsay, and farther on stands the Invalides, with its gilded dome and its tomb of Napoleon; near by the great bridge Alexandre III. leads us to the Little Palace and the Great Palace of the Salon, the palace of French art. On the left bank the Tour Eiffel will be seen; it has rendered great service to France as the transmitting station of the national wireless system.

Military Town-planning

The Avenue of the Champs Elysées terminates at the Arc de Triomphe, which is one of the most artistic and grandiose arches in Europe. From this structure streets radiate in the fashion of the conventional star in various directions, hence the name, Place de l'Etoile. This realized in part the conceptions of the prefect of the Seine, Baron Haussmann. The suggestion arose not merely from considerations of town planning, but because Napoleon III. was persuaded that these broad avenues would render difficult the old Parisian game of putting up barricades.

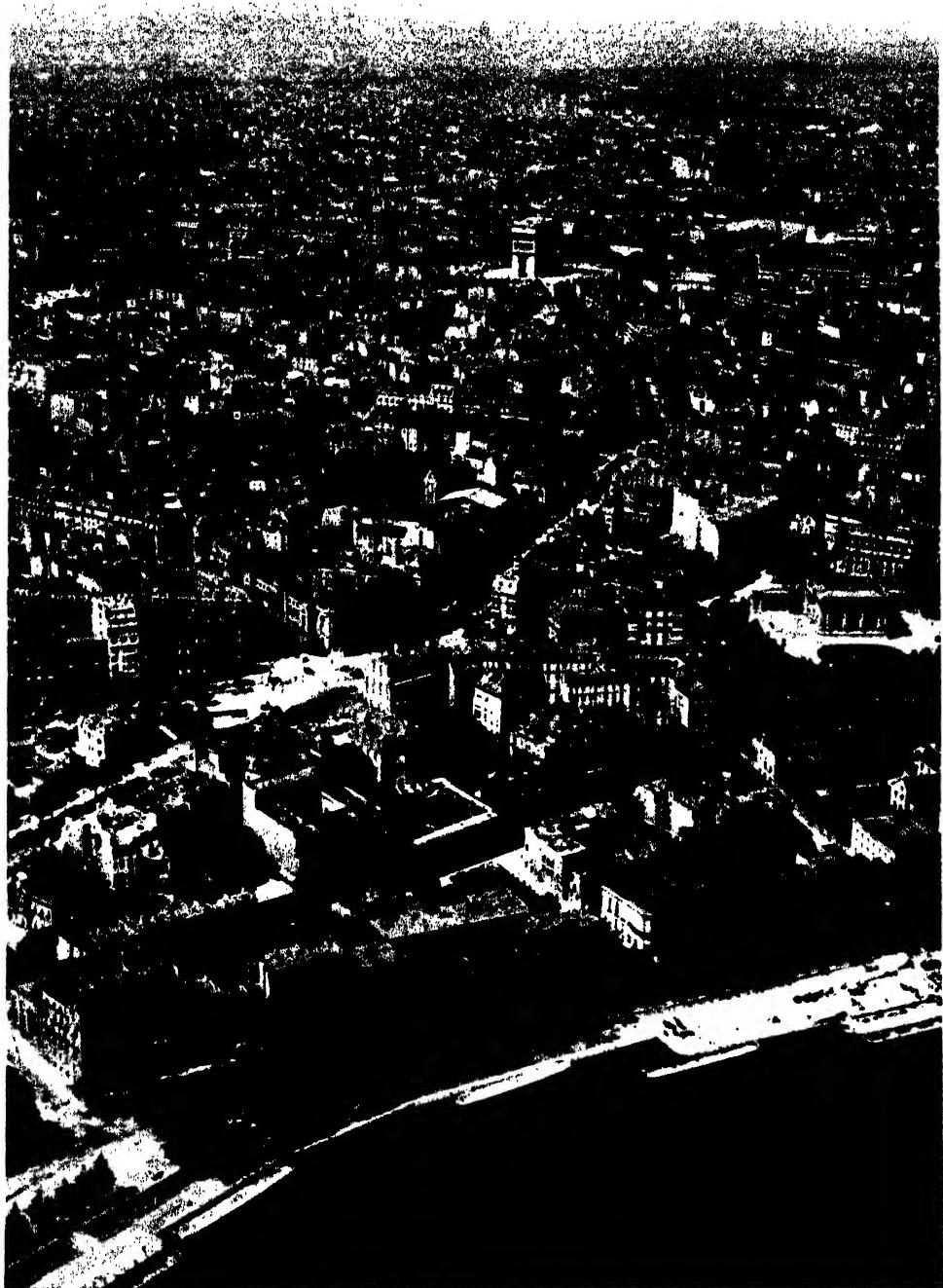
So far, then, we have learnt something of the exterior as part of the sights of Paris, and the farther the study is pursued the more interesting it becomes. But if we had so absorbed this learning till the very streets and buildings and pavements seemed to speak to us we would not necessarily be lovers or connoisseurs of Paris. We want to get at the real life and soul of the place, and this can only be attained by an intimate acquaintance with the people.

Paris should be seen in its days of trials, in its joyous moods, in the Mi-Carême Carnival, and in the National Fête of the Fourteenth of July, when the soldiers come into their own, not regarded, I think, as the instruments of an Imperialist policy, but as the citizens in arms for the defence of their liberties. Paris is sensitive to all these moods, and once more expresses them all in striking, in dramatic and at times charming style.

Paris of the Parisian

The true lover of Paris will not only be able to discourse of the "monuments," but he will tell you of the latest joke of the Boulevard, he will know the coming theatrical sensation, he will hear the gossip of the fencing saloons, he will see that the government is in danger, he will be able to tell you where, at six o'clock in the afternoon, you may find the popular novelist, the coming statesman, or the new genius of the artistic world; he will understand three distinct kinds of Paris slang; he will savour in its Attic salt the discourse of reception of the new Academician, or discuss the last remarkable communication of the Academy of Science and, in a more social and domestic sense, he will discover the real Parisien or Parisienne.

To study Paris is to gain a window that opens out on to the history of Europe; to know Paris well is to find in wonderment the ferment of strange, and often admirable ideas—this crucible of thoughts that have helped to direct the civilization of the world.



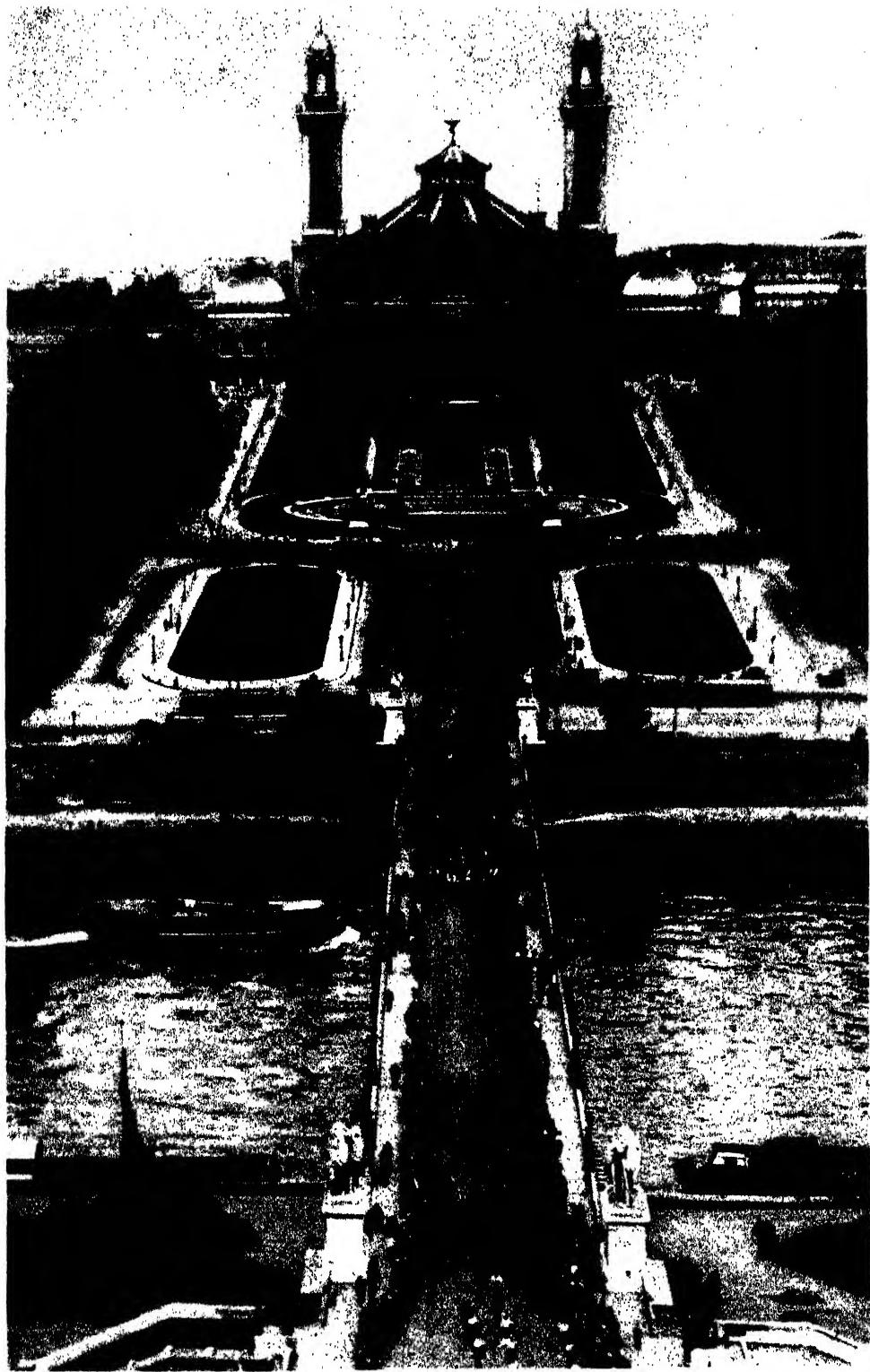
Donald McLeish

PARIS. This is how the great city appears looking northwards
from the summit of the Eiffel Tower, 984 feet above the Seine



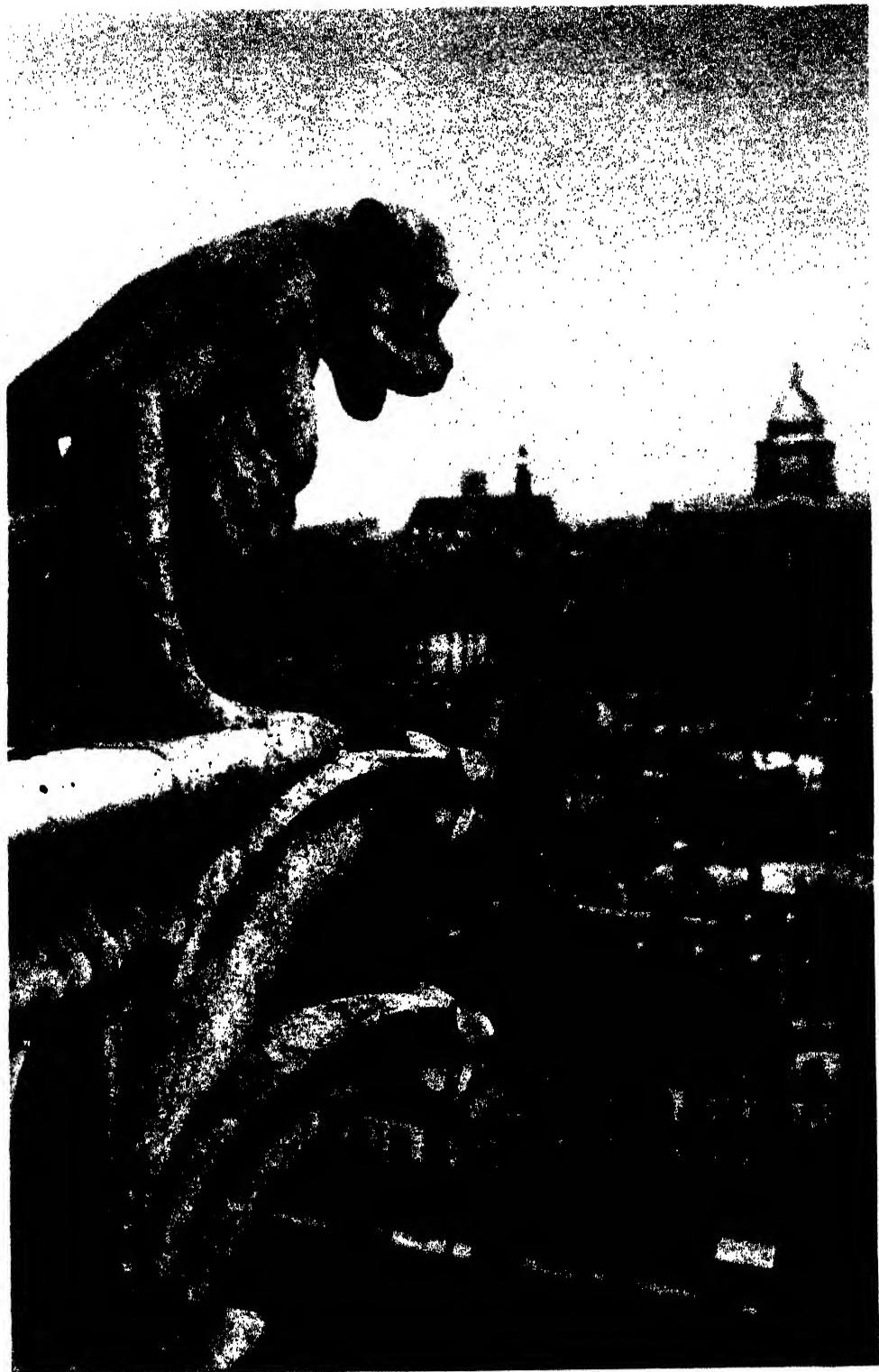
Donald McLeish

PARIS. Looking across the Seine from the Parc du Trocadéro
the Eiffel Tower, a broadcasting centre, stands on the farther bank



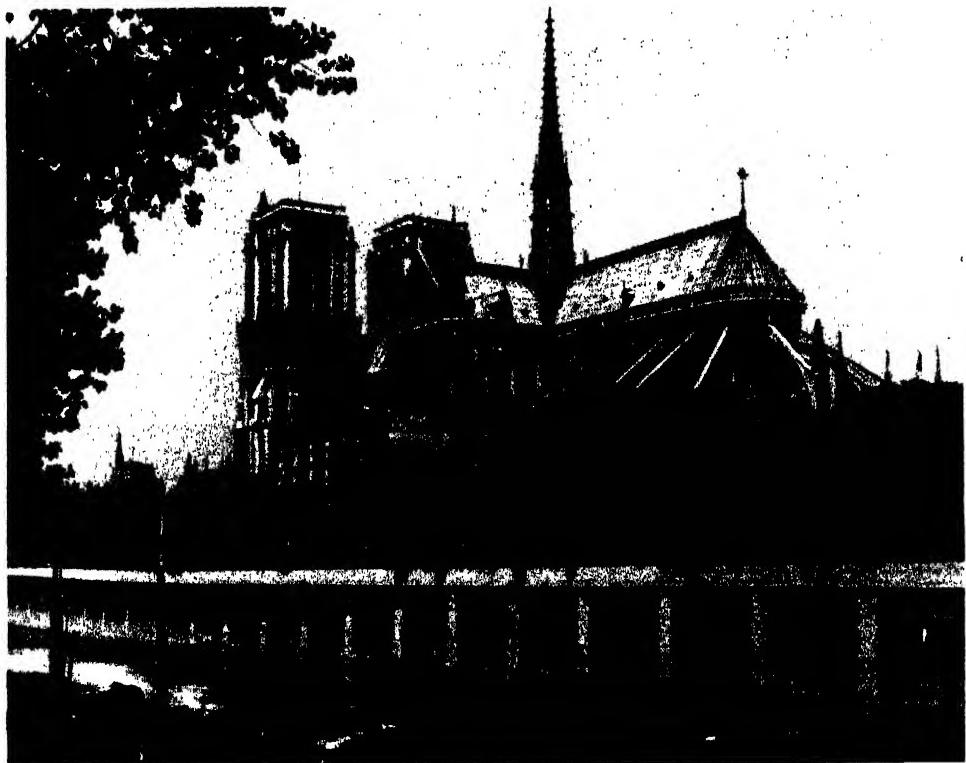
Ewing Galloway

PARIS. Two flanking minarets give the rotunda of the *Palais du Trocadéro*, which faces the *Pont d'Jena*, an Oriental appearance



Donald McLeish

PARIS. This stone demon, symbolising brute strength, snarls at the city from Notre Dame. On the right is the Panthéon



Donald McLish

On the eastern end of the Ile de la Cité, close to the Pont de l'Archevêché, stands the magnificent cathedral of Notre Dame



Donald McLish

PARIS. Adorning the towers and balustrades of Notre Dame are the famous gargoyle figures in the shape of beasts, birds and devils



PARIS. In the quiet gardens of the Hôtel de Cluny shafts of light pierce the foliage and softly touch the wonderful sculptures and statues, the spellbound inhabitants of this enchanted grove.

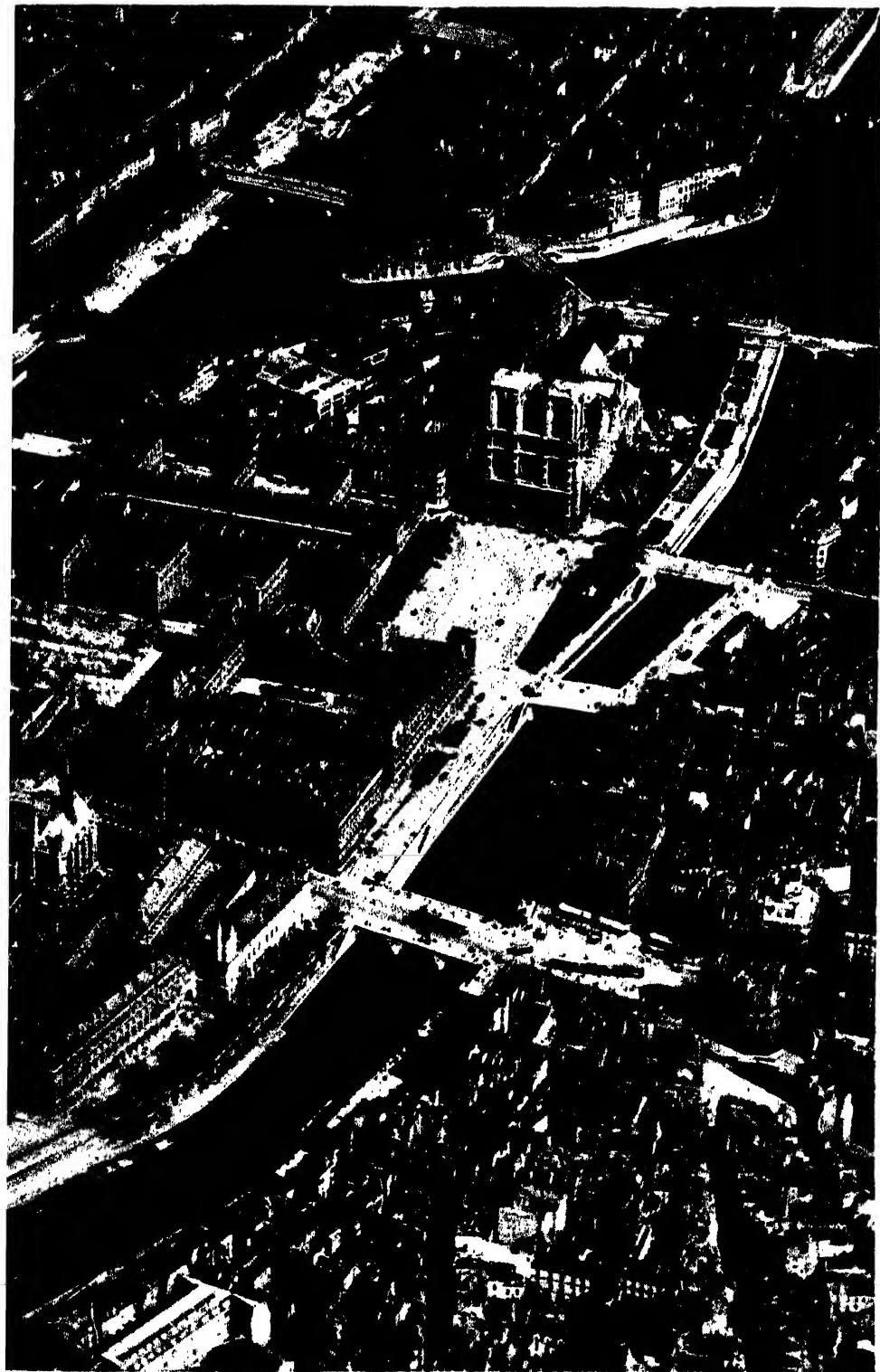
E. Waymark

PARIS. With a single arch of steel the Pont Alexandre III spans the Seine. At either end gilded figures of Fame and Pegasus surmount the tall columns, and beyond are the piers of the Pont des Invalides.



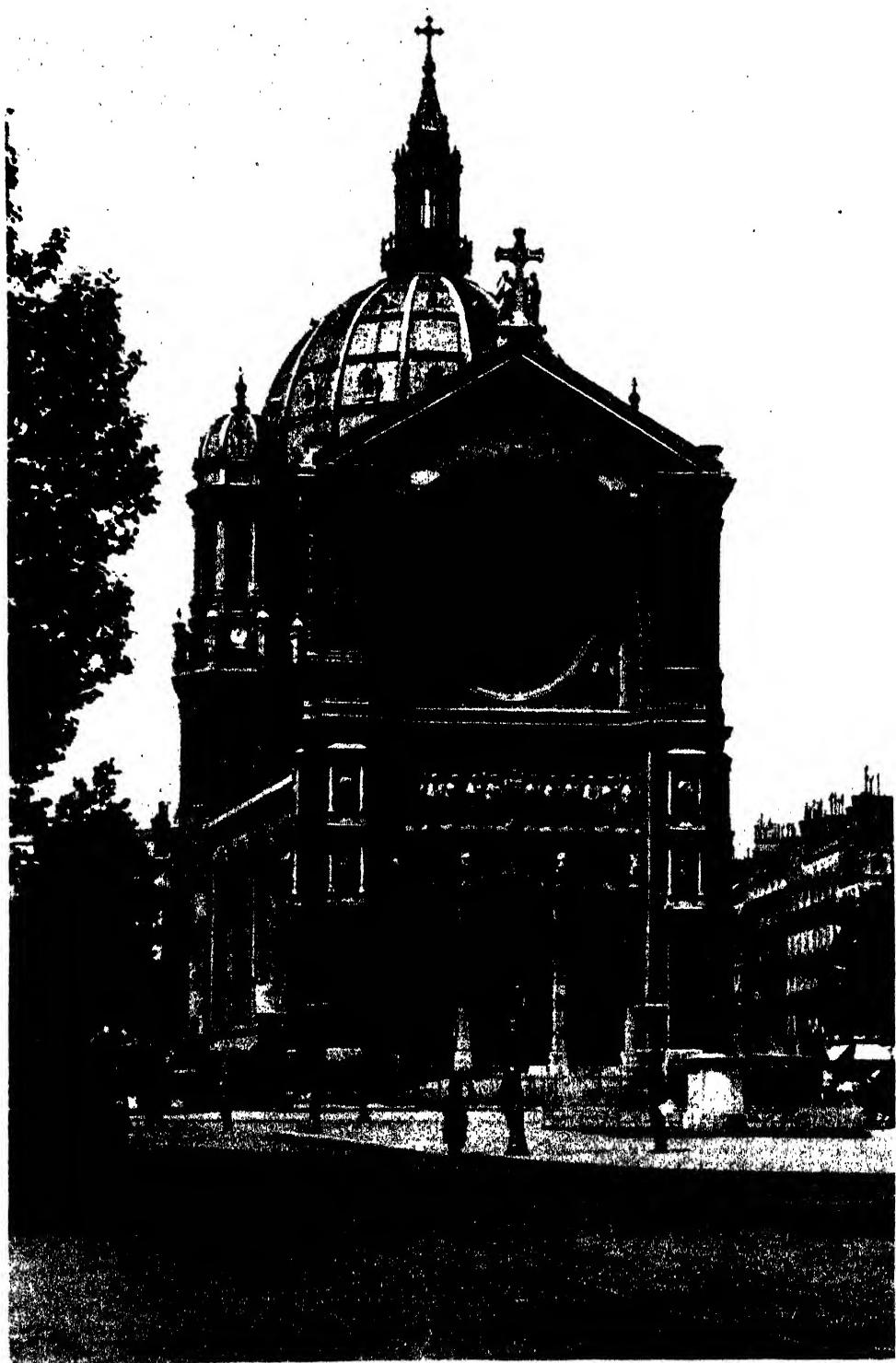


PARIS. Moored to the banks and the Ile St. Louis by many bridges, the Ile de la Cité lies on the Seine like some great ship with stone superstructures.



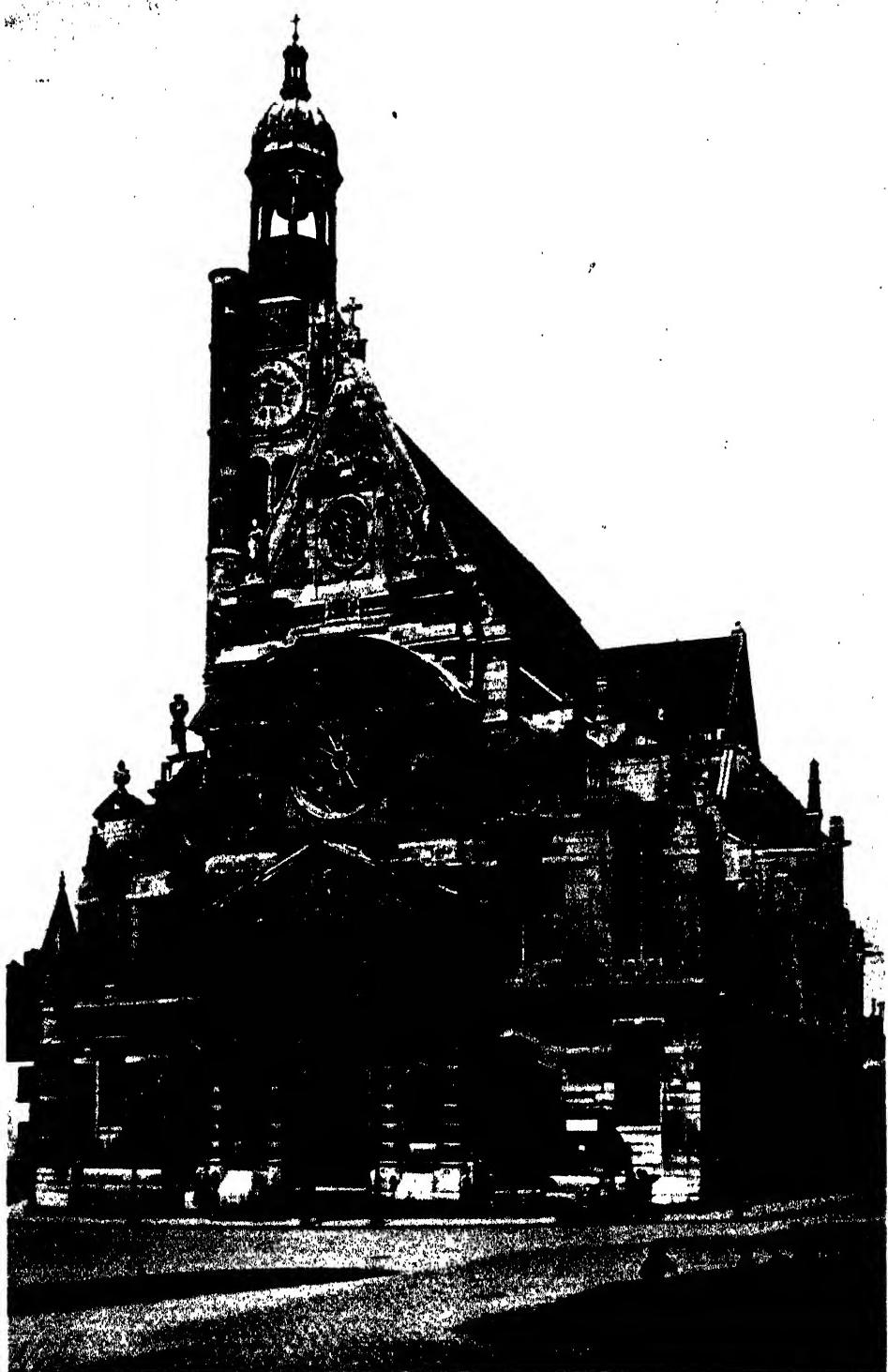
Aerofilm

In the foreground are the Palais de Justice, Sainte Chapelle and the Conciergerie, behind the last the Tribunal de Commerce, and in the distance Notre Dame



Donald McLeish

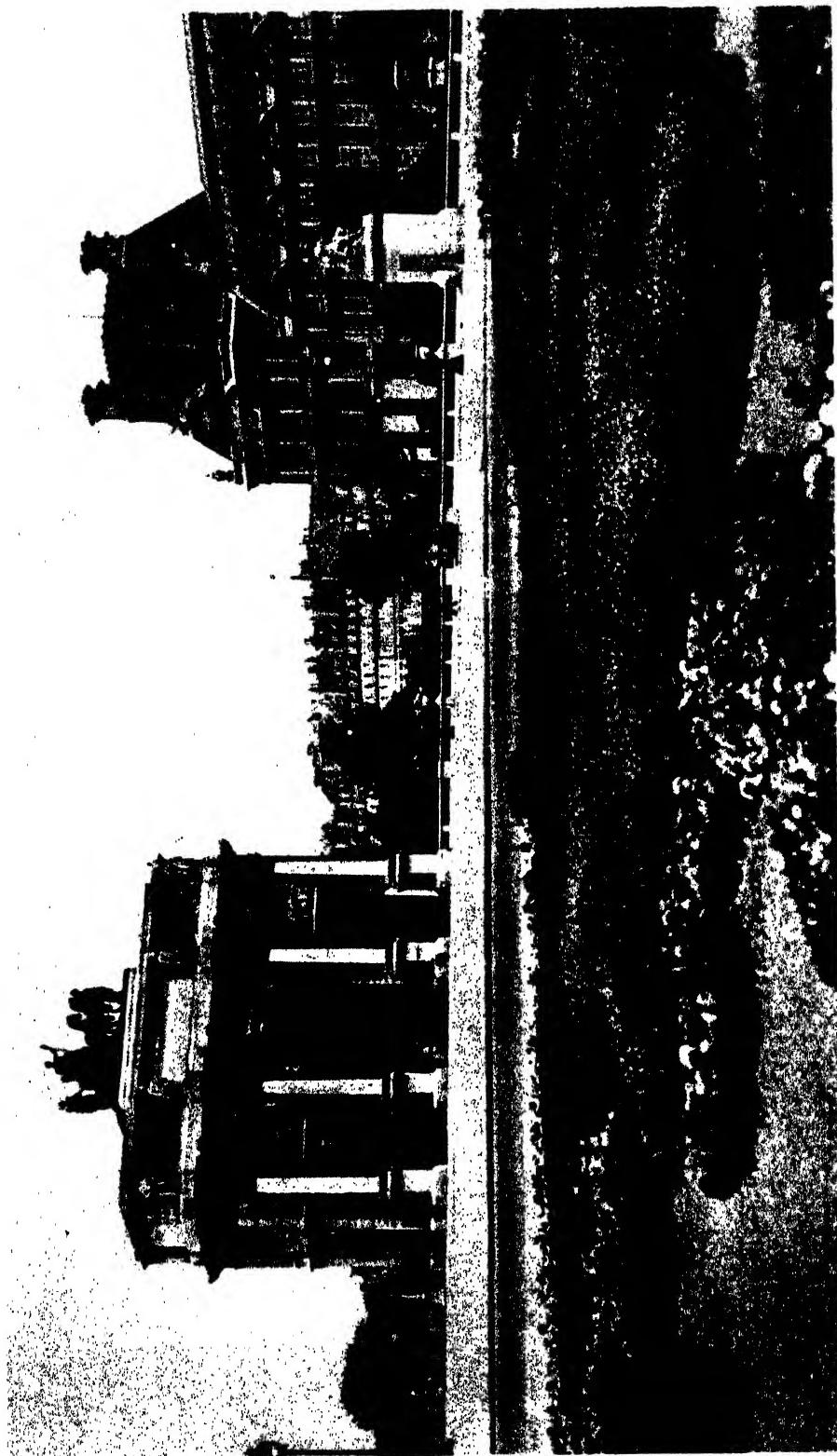
PARIS. Over the triple archway of the church of St. Augustin are statues of Christ and the Apostles and a fine rose window



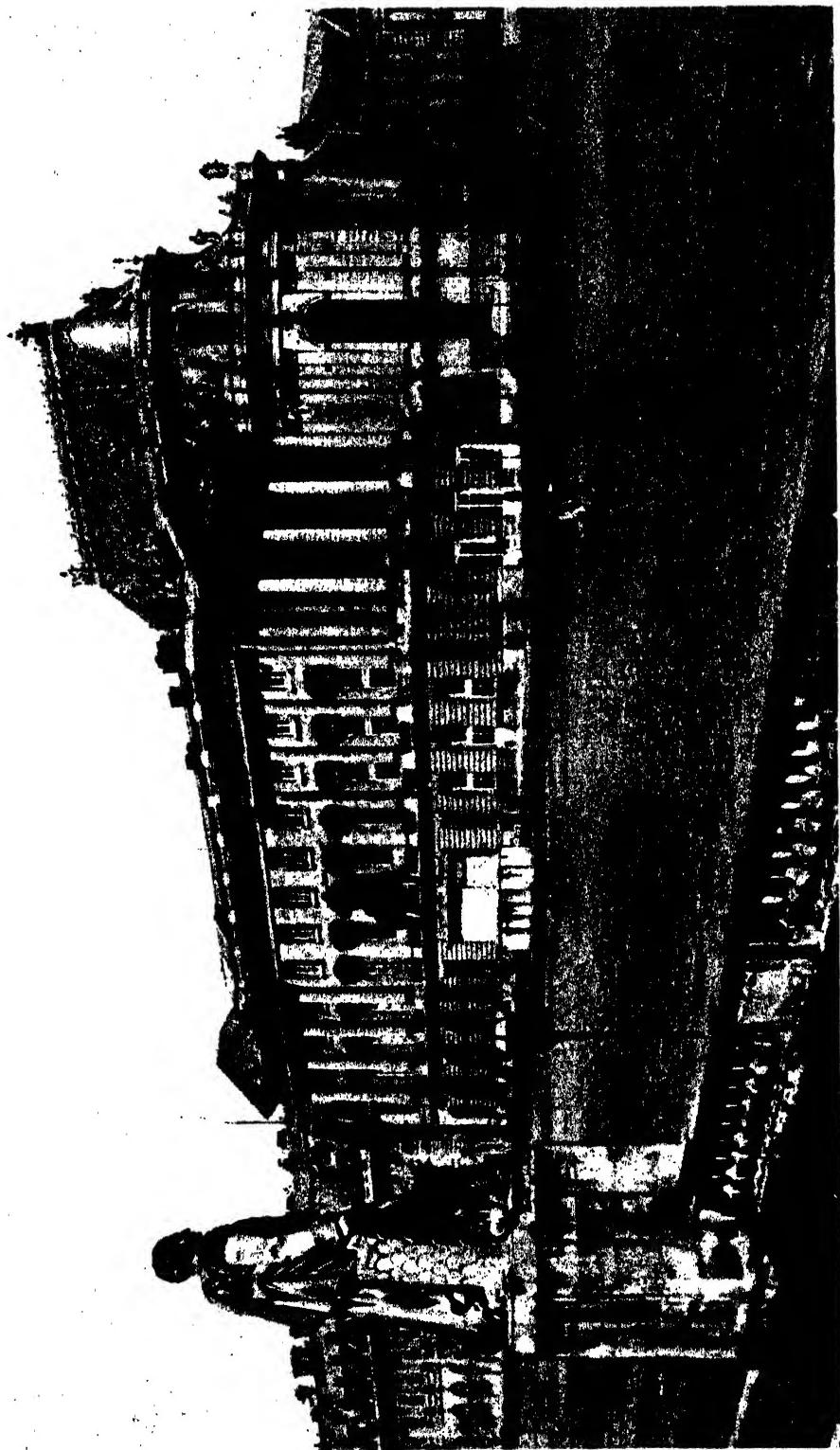
Donald McLeish

PARIS. *The beautiful church of St. Etienne du Mont, which was rebuilt under Francis I. in 1517, faces the Place Ste. Geneviève*

PARIS. On the Arc de Triomphe in the Place du Carrousel is a bronze chariot-group and figures of soldiers of the Empire. To the right is the Pavillon de Marsan, forming a part of the Louvre



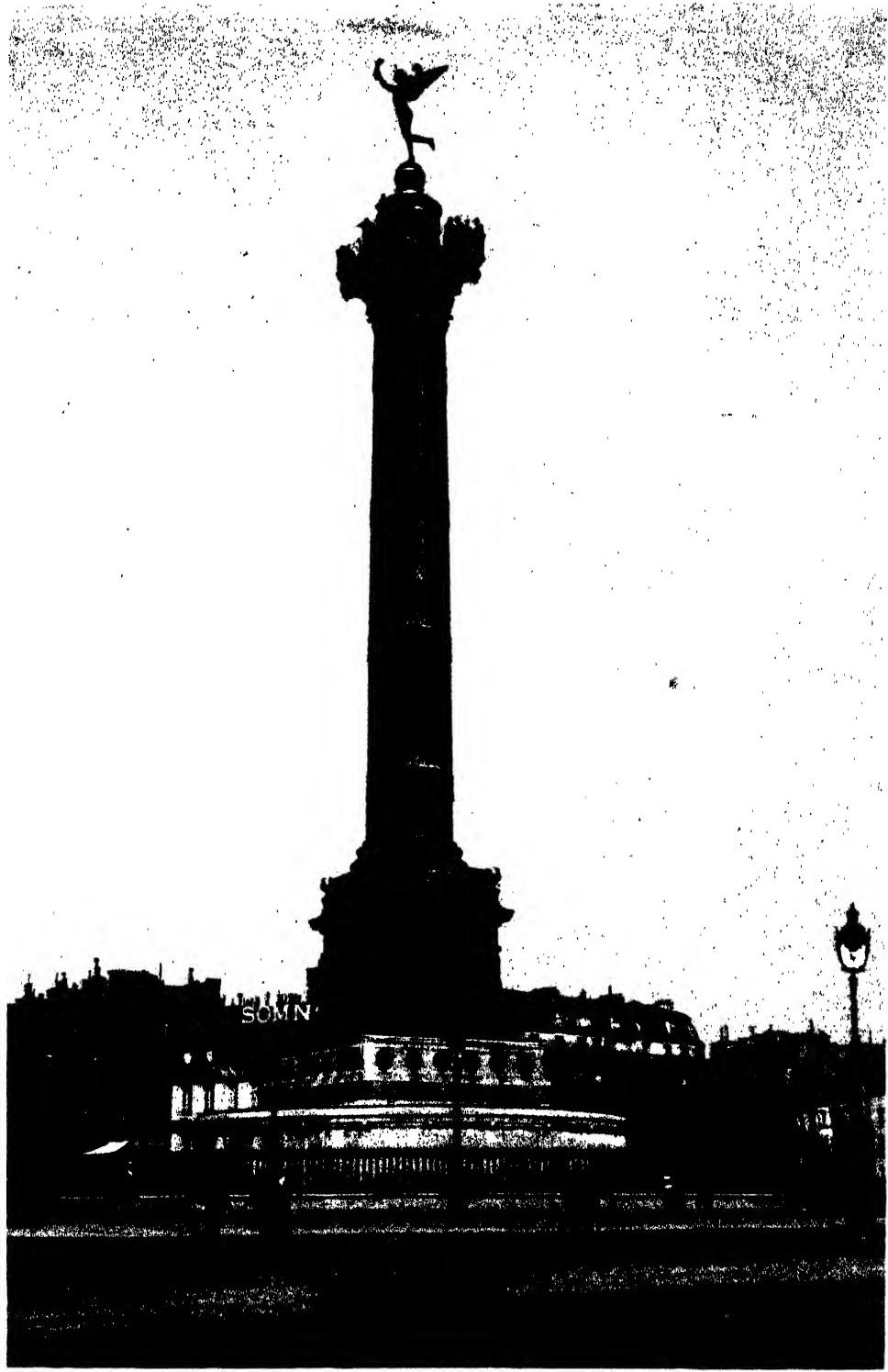
PARIS. There are many statues of famous Frenchmen round the Avant-Cour or Cour des Ministres of the palace at Versailles. Here are seen the pavilion in the neo-classic style by Gabriel, and the chapel





Donald McLeish

PARIS. Within the walls of the great Conciergerie, Marie Antoinette and many other famous "aristos" spent their last days



Donald McLeish

PARIS. *The July Column in the centre of the Place de la Bastille
commemorates the victims of the revolution in July, 1830*



Ewing Galloway

Opposite the Tuileries Gardens the north side of the fine Rue de Rivoli becomes of uniform design with arcades and balconies



Ewing Galloway

PARIS. On one side of the Place de l'Hôtel de Ville is the Hôtel itself, a magnificent building in the French Renaissance style

PATAGONIA & TIERRA DEL FUEGO

South America's Farthest South

by W. S. Barclay

Author of "The Land of Magellanes," etc.

PATAGONIA is the geographical but not the political title given to a very wide and varied region, in which respects it resembles the "Sahara" marked on our earlier atlases. Chile and Argentina divide "Patagonia" between them, each administering its own territory. Nevertheless, "Patagonia" is a useful, if somewhat vague, term by which to denote the most southerly portion of South America, and as such is used not only abroad but locally.

When Magellan and his successors, seeking the Spice Islands of the Pacific by the south-west passage of America, had left behind them in turn the luxuriant shores of Brazil and the flat pampas of the river Plate, they found in Patagonia a shore-line of shingle beaches rising into arid headlands, open roadsteads with few safe anchorages, and as far inland as the eye could reach sterile steppes, whose bleak landscape brought the chill of discouragement to all but the boldest.

How Patagonia Got its Name

In March, 1520, at San Julian Bay, 200 miles north of the strait that was afterwards to bear his name, Magellan first landed in Patagonia and, planting a great cross upon a hill near by, took possession of the land in the name of the King of Spain. Magellan's cross drew the attention of a band of aborigines who, like all the tribes (whether called Teheulches, Pehuelches, Tehuenches or, on the south Chile frontier, Araucans), possess in common a robust stature, straight, black hair and heavy, massive features. They wore long guanaco robes and their feet were wrapped in sandals of the same skin, fur outward. A tuft

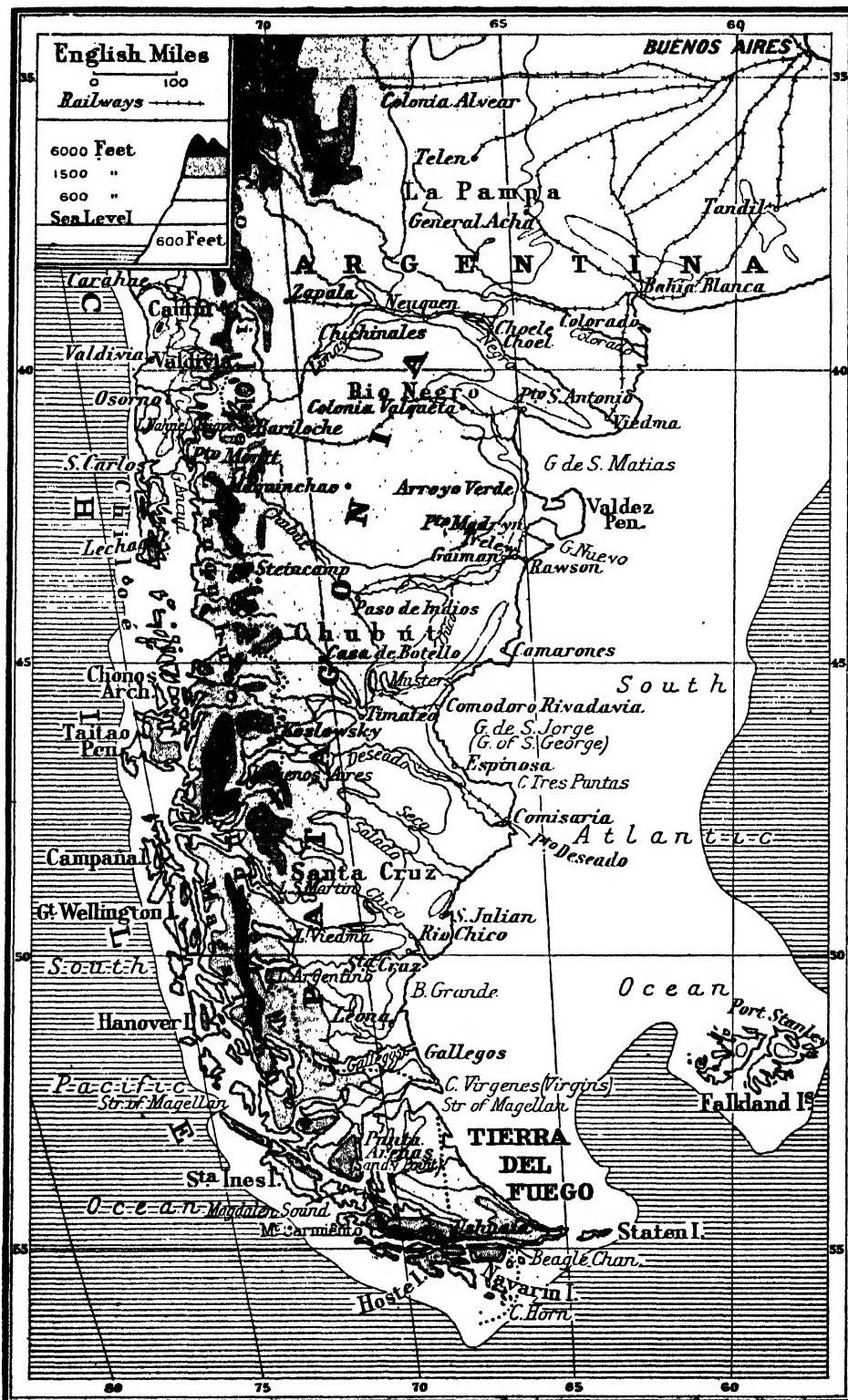
of grass thrust in for warmth and to aid foothold on the ice-encrusted slopes of the tablelands, added to the size of their extremities. This so struck the Spaniards that they called them "Patagones," or "big-feet." Thus their land became Patagonia and so remains down to our day.

Chile's and Argentina's Share

The Argentine boundary of Patagonia properly begins where the Rio Negro cuts a westerly course from the Andes, to enter the Atlantic at lat. 41° S., some 200 miles south of Bahia Blanca port. The territory of Rio Negro--for these outlying districts are not yet granted the semi-autonomy of provinces in the Argentine Confederation--comprises 79,000 square miles with 42,000 inhabitants. That of Chubut immediately southward, taking its name from the Chubut river, extends to lat. 46° S. with 95,000 square miles and 23,000 population.

The final territory is Santa Cruz, extending south to Cape Virgins, the Atlantic approach of the Strait of Magellan and accounting for 106,000 square miles, but only 10,000 inhabitants. Some might also include here Argentine Tierra del Fuego, a tiny slice of land, east of a plumb-line dropped from Cape Virgins to the Beagle Channel. But though farthest south of all Argentine possessions, Tierra del Fuego is divided from Patagonia by the narrow seas of Magellan and, to an Argentine, Patagonia is a mainland term.

It is a very different tale on the Pacific coast. The true southern archipelago of Chile begins at the great island of Chiloe in the Gulf of Ancud. Chilean "Patagonia" thus includes part of the province of Llanquihue, starting



HOW TWO REPUBLICS SHARE PATAGONIA AND THE "LAND OF FIRE"

from about lat. 42° S., with 34,778 square miles and 148,000 population. It extends to the strait and to the extremity of South America, Cape Horn itself, as the Territory of Magellanes, which has an estimated land area of 65,355 square miles with a white population of 30,000.

Where the Andes meet the Sea

The parallel ranges of the Andes that in the north enclose the great central valley of Chile, here dip into the ocean. Valley lands are replaced by intricate passages and fjords, threading their way far into the Cordillera, till they resemble the Norwegian coast in their picturesque ruggedness. Precipitous mountain shores are covered by dense forests of Antarctic beech, twisted by incessant south-westerly gales and rotting under a soaking rainfall, reaching 80 inches per annum.

Great glaciers descend from peaks in plain sight throughout from the ocean, their height gradually lowering from 10,000 feet by Chiloe in the north, to 3,000 feet in the Beagle Channel, where—in about the same south latitude as Hull lies in the north—the line of perpetual snow is only 1,500 feet above the sea-level.

Thus, separating and joining the twin Patagonias, stands the great Cordillera of the Andes, with its peaks and passes, its confused toothills. On its eastern flank the great longitudinal valley of Patagonia with its chain of attendant lakes comprises the most fertile land in all the south.

How even Darwin Erred

So we can already see how far the true picture of Patagonia differs from its conception by early explorers, and even by Charles Darwin, as an open, sterile plain, growing a coarse scrub on its pebbly soil and fitted only for its giant nomad tribes. We also know now that the Patagonian Indian, though of a stalwart breed, averages no taller than most of the Scandinavian races, or than the ordinary country-bred Englishman.

Despite their surface contrasts, however, Argentine Patagonia, Chilian Magellan and Tierra del Fuego's rocky coasts and islets have all a common heritage. They were often claimed, but never occupied till very recent days. Their history is the record of armed squadrons, or exploring expeditions, despatched to the Pacific by the Western route through the strait or round Cape Horn. For three hundred years after Magellan's passage, while the rest of South America's frontage on the ocean crystallised into new communities under Spanish or Portuguese rule, these southern regions still remained a No Man's Land. Chile took formal possession of the strait and the Fuegan Archipelago in 1843, but only in 1881 executed a formal treaty with Argentina defining their common Patagonian frontier, though, as will be seen, the actual fixing of this boundary was delayed till 1901.

New Countries for the White Man

So it fell to the end of the nineteenth century to prove that Patagonia and Tierra del Fuego are countries where the white man could work and thrive. The bracing climate, cold winter and hardy, scattered population make Patagonia even now almost alien to the rest of South America. Yet the voyage to the Strait of Magellan can be made within a week by comfortable coasting steamer bearing the Argentine or Chilian flag, the distance being about equal on either coast; i.e., to Punta Arenas (Sandy Point) from Valparaiso 1,445 miles, and from Buenos Aires 1,355 miles. The Pacific Steam Navigation Co., sailing from England to the west coast fortnightly, does the journey between these ports and Sandy Point in half the time. The distance south from Sandy Point to Ushuaia in the Beagle Channel is about 200 miles through the inner archipelago.

On the rugged Pacific coast and islands business is chiefly confined to a little lumbering and scattered trading ports. Abundance of sea fish and shellfish,

including oysters, has encouraged a small local supply to Chilean towns, but the fishing industry generally suffers from lack of suitable refrigeration and transport. In earlier days the fur seal abounded both on the Pacific shore and around the coasts of Tierra del Fuego, but the rookeries are now exterminated, as are also colonies of the defenceless manatee, or sea-cow. A minor trade is done in the pelts of wild animals, foxes, otters, of which

Buenos Aires and the Falkland Islands, have been very successfully interbred with the Corriedale strain obtained from New Zealand. It is interesting to note that a pioneer establishment by Messrs. Duncan Fox & Co. of sheep farms was started in Peru near Junin with the same Corriedale strain, which successfully survived transplanting from sea-level at the Strait of Magellan to a height of about 14,000 feet on the Andean plateau.



Royal Geographical Society

SANDY POINT, THE CAPITAL OF MAGELLANES TERRITORY

Sandy Point or Punta Arenas is a town of Chile on a peninsula in the Strait of Magellan, and is one of the most southerly towns in the world. It is a coaling station and a distributing centre for South Patagonia. Among the exports are included wool, furs, timber and frozen meat. On the right can be seen a small portion of the hotel and restaurant

Sandy Point is the centre, but this, too, is on the wane. On the Taytao peninsula is found an interesting specimen of the smallest deer known to the naturalist.

The methods of sheep farming introduced by the early settlers from the Falkland Islands and from Buenos Aires still prevail and a large proportion of the managers on the stations are British subjects. The sheep, originally of the Romney Marsh type, imported from England,

Argentine has always had the advantage over Chilean Patagonia of uninterrupted connexion overland with its federal capital of Buenos Aires. The interior of eastern Patagonia is also readily accessible by sea, the distance from any landing point on its 1,000 mile coast-line to the Andean foothills averaging only 200 miles over open tablelands.

The first Argentine colony in Patagonia, apart from government military posts guarding the Rio Negro, was that



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CATTLE GRAZING BY THE LOW SHORES OF BEAGLE CHANNEL

Half of Beagle Channel lies in the Argentine portion of Tierra del Fuego, and along its shores there runs a narrow strip of pasture. During the winter months the cattle are turned into the "bush" forests to feed on the edible shrubs. The herds are not large and are kept mainly for dairy purposes, the original beasts having been introduced by boat towards the end of last century.



Royal Geographical Society

SNOW-COVERED MOUNT SARMIENTO FROM MAGDALEN SOUND

Clouds usually hide the greater part of Mount Sarmiento, but here the veil has been drawn aside for a few minutes. The peak lies in that portion of the island of Tierra del Fuego which belongs to Chile, and is the highest in the district, over 7,200 feet. It is named after Pedro Sarmiento de Gamboa, who tried to colonise the Strait for Spain in 1581. All the colonists perished but one man.



Royal Geographical Society
WOODLAND AND STREAM NEAR THE BAY OF LAPATAIA

Lapataia is a sheltered bay lying about 20 miles west of Ushuaia. There is no town at Lapataia, only a lumber mill and a few fishermen's huts. Landscapes of woods, streams and hills are often found in the interior of Tierra del Fuego which may surprise those who have only seen its forbidding coasts. In the background is the Martial range, the last of the Andes.

of the Welsh settlers in the Chubút valley in 1865. After some trying experiences, the success of the colony was assured when in 1872 they began to utilise the waters of the Chubút river for irrigation. Three hundred miles of main ditch are now open for 70 miles up the valley; the capital of the colony is Rawson, a town of 5,000 inhabitants on the left bank of the river, about eight miles from its mouth. Near by is the town of Trelew, with 3,500, the terminus of the railway built over 50 miles of arid tableland from Puerto Madryn in Golfo Nuevo.

The deep anchorage in this bay enables shipments to avoid the dangerous channels and sandbars which mask the outlet of the Chubút, in common with all Patagonian rivers on the Atlantic. Produce from Chubút consists of wool, wheat, beet-sugar and maize. Farther south shipments tend to purely pastoral products such as wool, frozen mutton and tallow and hides, from the port towns of Descado, Santa Cruz, Gallegos and other minor points.

Output of the Oil-fields

Comodoro Rivadavia, a port on the Gulf of St. George, is noteworthy for its exports of petroleum. Although this Chubút oil-field has proved patchy on being drilled, both by the government and the private interests operating here, the Argentine output of oil, which is principally derived from Patagonian fields, now approximates 500,000 tons annually, a very useful addition to the republic's fuel supply.

The steppe lands of Patagonia are not fertile, but they are eminently suited for sheep-breeding. From 800 to 1,200 sheep, with a few working horses and milch cows, will suffice to stock a square league—for so all land in Patagonia is still reckoned—about 15 per cent. of the number which may be grazed on the intensively cultivated "inside camps" of Buenos Aires province. The league contains 2,500 hectares, or nearly nine square miles. The pasturage on these pebbly Patagonian uplands is exceptionally

sound and healthy, though the sheep-scab is everywhere prevalent, but only owing to laxity in the enforcement of dipping. The rate of increase is high and frequently exceeds 100 per cent. of the breeding ewes. Farmers have had few transport problems, as all rivers and valley-ways lead to the Atlantic, where coasting steamers are ready to pick up their produce. In pioneer times, before the railway, the motor truck and the Ford car had revolutionised Patagonian transport, flocks exported their produce on their own legs, being driven down to the beaches where the wool was shorn and baled "*in situ*," ready for loading.

Glacier-carved Cañadones

Transverse valleys or "cañadones," running from the Andes to the Atlantic, and not necessarily coinciding with its principal rivers, are an important factor in Patagonian settlement. These depressions mark the track of enormous glaciers, the remains of a still greater ice cap, which, before retreating to the Andes, stretched far beyond the present shoreline into the Atlantic. There are some half-dozen major valleys which at intervals carry running water or lakes in their bed. They vary in width from one to 20 miles and have smaller tributary systems.

Natural Shelter from the Winds

The importance of the "cañadon," large or small, lies in the shelter it affords from winter gales and from the incessant summer wind; also in its fertile soil, and access to a running stream, or at least to well-water, both of which are entirely lacking on the tableland. The farmer's use of the upland pastures largely depends on his holdings in the valleys, a condition which applies to the whole inner belt of Patagonia from the Rio Negro to the straits.

These tablelands form such a striking contrast to any formation of a similar kind in South America, that geologists characterise them simply as the "Patagonian formation." They

**GREAT MOUNTAIN WALLS ENCLOSING THE LONGITUDINAL VALLEY—**

For many years Patagonia was considered to be comprised of bush-covered sterile tablelands, cut by transverse ravines and shallow rivers. Eventually the great valley was discovered at the foot of the Cordillera. This depression, which varies in breadth from a few miles to 20, extends almost throughout the entire length of the country. On one side it is bordered by the Cordillera and on the other by tablelands.



Royal Geographical Society

MULE WAGON ON A SANDY TRACK ACROSS THE TABLELANDS

The great tablelands of Patagonia are semi-arid owing to the lack of water, but most areas are suitable for sheep-raising. These uplands are almost insufferably hot, though a wind, caused by heat radiation, tempers the climate in the east. One of the chief difficulties that settlers in this vast country must overcome is that of transportation, since there is only a limited mileage of railway and roads are but rough tracks.



Royal Geographical Society

-PATAGONIA'S CAREFULLY HIDDEN AND MOST FERTILE REGION

All down the valley the soil is very fertile, allowing of mixed farming as well as ranching, while the rivers are well suited for irrigation work. In the territory about the Clubút river several colonies have been formed, notably a Welsh colony, the first European settlement in Patagonia, which has flourished since the completion of a system of canals for irrigation. There are also some mining districts in the Cordillera



Royal Geographical Society

LAKE NAHUEL HUAPI AMONG THE FOOTHILLS OF THE ANDES

Magnificent scenery is to be found in this district which has been called the "Argentine Switzerland." Hither come a yearly increasing number of tourists from the great cities to spend their holidays in boating, fishing and shooting. There is a chain of lakes strung out along the foothills, but Lake Nahuel Huapi is more accessible owing to the railway from San Antonio terminating at Bariloche, a little to the south



Royal Geographical Society

WOODEN HOUSES IN THE LITTLE SETTLEMENT OF USHUAIA BEneath THE WINTER SNOW

Ushuaia lies on Beagle Channel and is the capital of the Argentine territory in Tierra del Fuego, with regular steamer communication to Buenos Aires. Stock farms are situated along the Beagle Channel and there is also a considerable timber industry. The island is generally considered to have a rigorous climate and to be very barren, but the winters are stormy rather than cold, and the summers are cool, the mean annual temperature at Ushuaia being about 43° F. Barley, oats and potatoes are cultivated, but most foodstuffs except meat are imported. There are good fisheries along the coast, but the seal rookeries have been exhausted.

have a subsoil some 800 feet thick, composed of marine tertiary deposits of infusorial earth, with intercalated shell strata, as shown by the oyster beds raised some 300 feet high on the headland overlooking Comodoro Rivadavia roadstead. Over this subsoil have been deposited at a later period shingle beds about 200 feet thick. From the coast towards the Andes, the slopes of these beds, which are really ancient sea-beaches, show successive rises in steps of about 300 feet each.

sufficiently profitable to justify much attempt at permanent improvement. Patagonian farmers in consequence are entirely dependent on climatic conditions. Heat radiating up from the shingly tableland in summer sucks into its place the cooler air currents from the Andes. The result all over Eastern Patagonia is a fierce south-west wind, which starts at sunrise, reaches its maximum intensity at midday and ceases at sunset, throughout the entire summer season from November to April.



Royal Geographical Society

PIONEER PATAGONIA: LOADING BALES OF WOOL INTO LIGHTERS

Customs, tariffs and officials did not trouble the early inhabitants of Tierra del Fuego. Wool, the chief export, was packed into bales which were carried down to the shore and loaded into lighters, these being left high and dry at low tide. At high tide the lighters were rowed off to the parent ship which brought the settlers clothing, food and tools, all imported duty free

The levels along the railway running inland and westward from Puerto San Antonio reach a final elevation of 4,700 feet, near Bariloche, south of Lake Nahuel Huapi. Each vast level at each stage is practically invariable from north to south, save where cut by the intersecting cross-valleys. Thus, these latter are concealed from view till the traveller covers the last hundred yards. It is only when standing on their very verge that he is able to glimpse the winding silver of a stream far below, or the smoke arising from the lonely estancia of some farmer who pastures his sheep in their shelter.

Patagonian pasture-lands, save for limited patches of wheat and alfalfa land in the valleys, are obviously not

It prevents tree-planting, or even ploughing of soil, in the areas exposed to its lusty buffettings.

Its force may be reckoned by the fact that it will carry a constant stream of small pebbles, as big as a hazel nut, off the sharp edge of a plateau. Its desiccating effect accentuates that of a maximum rainfall of 15 inches, which over large areas is only 10 inches, or even less. Hence the drab monotony of this tableland landscape, which is invariably noted by travellers, but too often without reference to its compensating healthiness.

In the Andean foothills a continuous chain of lakes threads the longitudinal valley like a string of silver beads, and drains chiefly west into the Pacific.

through narrow defiles. These have been so worn by river torrents, fed by gales and melting snows, that in many cases they have cut back through the Cordillera from the Pacific side, and their headwaters now rest on the eastern pampas. This phenomenon, especially noticeable in the southern half of Patagonia, received especial attention from the British commission which in 1901-2 defined the boundary that was to separate Chile and Argentina.

Earlier agreements had wrongly assumed that the highest peaks of the Andes also formed throughout their length the much discussed "diversio aquarum" (water parting).

Araucaria pine and beech woods cover the hillsides of these southern Andes up to the snow-line, interspersed with a few natural open pastures. On the eastern foothills clearings made by fire by the settlers have encouraged a species of leguminous climbing fodder, much improving its capacity for pasturage. Such a cleared patch on the foothills will support 600 cattle per square league, as compared with 400 on uncleared ground and only 300 per square league on the pampas.

Noting the ease of travel in such a region, one of the most surprising facts about Patagonia is that it should have so long remained a mystery even to the governments which partitioned it.

Chile has now a splendid series of survey maps covering the whole of the boundary region, to which the traveller can safely trust. On the other hand, the Argentine government has embarked on a programme of state railway construction in Eastern Patagonia. The first rail section reaches from San

Antonio to Bariloche. The second artery starts at Comodoro Rivadavia in a north-westerly direction and, after serving the new oil-fields of Comodoro Rivadavia, passes by the interesting Boer colony near Lake Musters founded by emigrant farmers from the Transvaal, after the Boer War. Argentine Patagonia can reckon with some 6,000,000 sheep, while those in Chilian Magellanes number about 4,000,000. A fair proportion of the European immigrants entering the republic now take advantage of the liberal terms which are offered for settlement in these southern lands.

It would be optimistic to describe Patagonia as a land of promise either on the Chilian or Argentine side, when the settler finds such elementary duties as police protection and the education of his family dependent chiefly on his own efforts. Yet in the first twenty years of this century, from a practically undeveloped country, Patagonia as a whole has greatly progressed, whether on the Pacific or on the Atlantic seaboard. With its temperate climate and cold winters, and its large ratio of European population, Patagonia is a notable contrast to the popular conception of South America.

If social amenities are lacking in this land of vast horizons, the hard work that has already accomplished so much may soon bring them within reach. It is perhaps not without significance that Patagonia's pastoral wealth has yielded to her settlers rewards far exceeding any dreamed of by the early navigators and explorers, whose squadrons hurried past her bleak-seeming shores ever in search of the elusive rainbow gold of the smiling Pacific.

PATAGONIA: GEOGRAPHICAL SUMMARY

Natural Divisions. Pacific coast, fjords and inner channel. (Cf. British Columbia, Norway, South Island, New Zealand.) Andes and eastern plateau. (Cf. S. Alps, N.Z.) Shingle plains. (Cf. Canterbury Plains, N.Z.) Erosion results from ancient ice cap and raised sea beaches.

Climate. West coast, wet with prolonged storms. (Cf. British Isles and S. Island, N.Z.) Sheltered east side, with scanty

rains and daily summer south-west wind caused by the sun. (Cf. Otago, N.Z.)

Vegetation. Forest on wet west, scrub on arid east. Irrigation necessary for crops. Poor pasture. (Cf. Alberta in lee of Rockies.) Better pasture in valleys near the Andes.

Products. Sheep, wool, cattle, petroleum.

Outlook. A scanty population with a free wide range can thrive. This is the least Spanish part of Spanish-America.

PEKING

Departed Glories of the Forbidden City

by J. O. P. Bland

Author of "Annals and Memoirs of the Court of Peking"

EVERY city has its distinctive features, reflecting in some degree the history and character of its inhabitants, but there are few which can compare with Peking in the vividness with which a people's fluctuating fortunes are recorded in its ancient walls and high places, and in the sights and sounds of its streets and markets.

Nor are there many cities of to-day which so impress the stranger within their gates as Peking, with its elusive but imperishable flavour of romance, an indefinable quality which invests not only its monuments but the man in the street with a peculiar charm and distinctive dignity. In all its stones are sermons, telling of many a captivity led captive, of legions that have thundered by to oblivion without disturbing the ancestral ways or shattering the wisdom of the Sons of Han.

Peking presents, in more ways than one, an epitome of the history of the Chinese people. On its battlemented walls, in the dignified splendours of the Palace, in the mysterious seclusion of the Forbidden City, and in its wide thoroughfares and high-walled enclosures, one invader after another has left his mark; but always the alien conqueror's original plan has been modified to conform to Chinese ideas of architecture and culture.

China's Capital for 1,000 Years

The very fact that for a thousand years, under various names and successive dynasties, it has remained the capital of China, emphasises the fundamental stability and the recuperative vitality of a people whose social system inevitably makes their history a record of ever-recurring

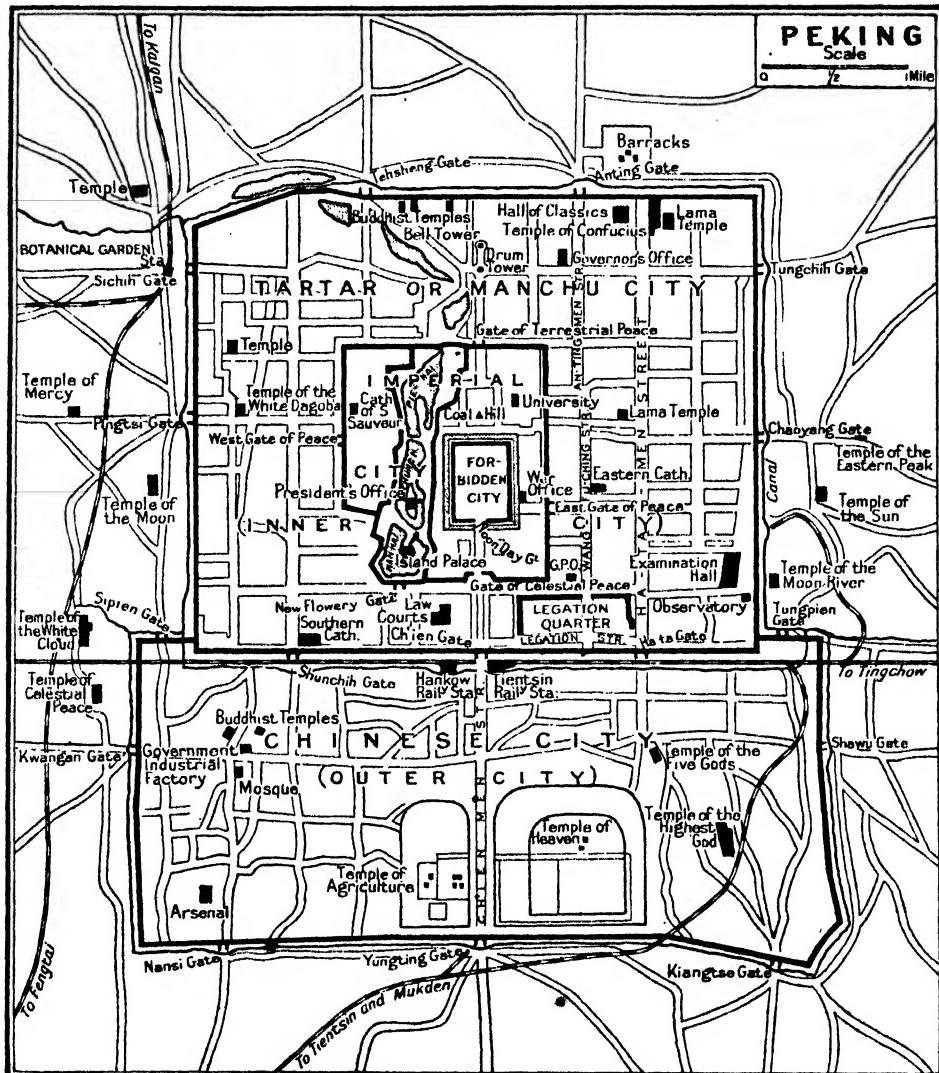
cataclysms, while strengthening the fibre of the race to endure them all.

From the semi-mythical chronicles of olden times, it would appear that a town, known as Ch'i, existed on or near the site of Peking as far back as 1100 B.C. In 1751 the Manchu Emperor Ch'ien Lung, a learned monarch greatly given to the composing of commemorative inscriptions, erected a marble tablet at a spot two miles north of the present Tartar city and wrote upon it: "Here stood one of the gates of the ancient city of Ch'i."

Many Names and Successive Rulers

It is probable that, from the day when first the surplus population of Shantung and the Yellow river basin began to push its way north towards the then unpeopled lands of Chih-li, and thence onwards into Manchuria and Mongolia, a spot so favourably situated between the hills and sea must always have held a walled town, if only to serve as a base of supplies for the settlers and a place of refuge against the raids of predatory tribesmen from the northern steppes. Under many names and successive rulers, Chinese and Tartar, it grew until it attained to the dignity of a provincial capital.

In the tenth century, attracted by the wealth of agricultural China, the Khitan Tartars came pouring down from Manchuria. The city (then known as Yu Chou) was ceded to them with a large tract of territory by the Chinese. In A.D. 986, not finding it to their liking, the Tartars destroyed it and then rebuilt it nearer to their heart's desire—a reproduction in brick and stone of a Mongol encampment, a place of broad streets running north and south, with



CONCENTRIC CITIES OF CHINA'S MYSTERIOUS CAPITAL

great courtyards and open spaces, where the retainers of their princes could camp with their camels and horses.

Early in the twelfth century (these were fighting times) the Chinese recaptured and held it for a while. Then in 1151 came another warrior race, the Chin Tartars, who overthrew their Khitan cousins and proceeded to conquer all northern China, winning it as far south as the Yellow river.

Under the Chin Tartars the city (known as Chung Tu) was much enlarged and became a capital and royal residence. In 1215, after a fierce siege,

the Tartars were overthrown by the Mongols under Jenghiz Khan, who put the city to the sword. It was rebuilt, a little to the north, by his grandson, the great Kublai Khan. That Napoleon of the steppes laid out his new capital on the lines of spacious grandeur and architectural dignity which distinguish Peking to this day. Marco Polo, the great Venetian, has described the splendour of the great khan's court and of the city newly risen from its ashes.

After Kublai Khan two great rulers, the one a Chinese and the other a Manchu emperor, contributed each in

his turn, to make the capital of China a worthy monument to their respective golden ages—namely, the Ming emperor Yung Lo (1403-1425) and the Manchu emperor Chien Lung (1735-1796).

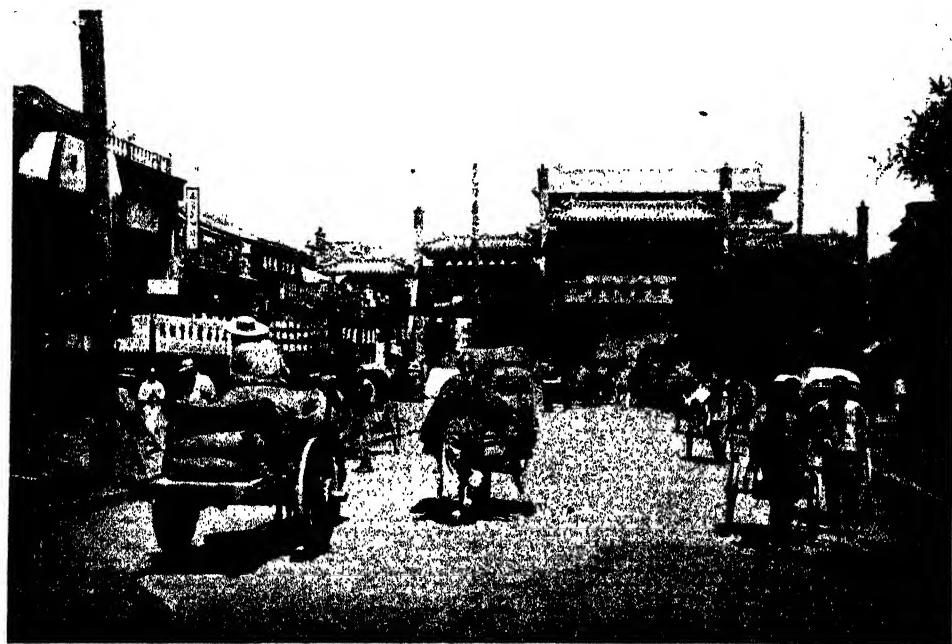
The city of Peking, as it stands to-day, with its weather-beaten walls and stately palaces, magnificent even in the twilight of its tutelary gods, is largely the city as Yung Lo made and left it ; but it is to be remembered that he built on the splendid foundations that the great Khan had laid. It is to the credit of the Manchu emperor Ch'ien Lung that he maintained and embellished all that was best in the work of his great predecessors. Now Tartar, Mongol and Manchu, each at his destined hour, have gone their way, and the Emperor's Dragon Throne has given place to a republic, but memories of their departed glories still linger in and around the city that they built.

It is recorded by ancient chroniclers that when the first city was about to be built on the site of Peking, the king sent for his astrologers and bade them choose

the dryest spot in the province. The location they selected (exactly in the centre of the province of Chih-li) was certainly a dry one ; it was also peculiarly favoured in the matter of auspicious "feng shui," or benevolent supernatural influences.

From the walls of the city the level plain of a great alluvial delta extends southwards for about 700 miles ; eastwards, the same flat country stretches to the Gulf of Chih-li, 91 miles away. Fifteen miles to the west and 25 miles to the north, the hill country begins ; 40 miles north-west, the Great Wall of China runs across a range of mountains. The cold winds that blow from the Mongolian plains, combined with an average annual rainfall of 20 inches (most of which occurs in the three summer months), produce a climate which is remarkable for extremes of temperature, with a large proportion of sunshine and an unconscionable quantity of stifling dust.

The soil of the surrounding plain is loose and light ; a light breeze is



CH'IEI MEN, ONE OF THE TEN GATES INTO THE TARTAR CITY

The Ch'ien Men is the main entrance into the Tartar or Manchu city, and stands at the end of the Ch'ien Men Street, which is the busiest thoroughfare in the Chinese city. Peking is in telegraphic communication with various provinces and also possesses a system of telephones, though the service is capable of improvement. To the west of Ch'ien Men Street is the Mahomedan quarter

Ewing Galloway

sufficient to scatter it in thick grey layers over the city. When a strong wind blows from the north, great clouds of yellow dust come with it, blotting out the sun and making life a burden to everything that breathes. The astrologers were thorough in their search for a dry spot, for amidst all this dust there is little or no water to be seen. The nearest rivers, the Pai Ho and Hun Ho, are several miles away. Peking's only water communication with the provinces lies in the Grand Canal, built from the Yellow river to Tientsin, and thence connected with the capital by Kublai Khan in 1283. Yet, in spite of the dust, a rudimentary drainage system, and a primitive water supply, Peking is on the whole a very healthy city.

Class of "Expectant Officials"

According to the figures compiled from police statistics, the population of Peking in 1920 was 811,500, of which number only about a third were females. This disproportion is explained by the fact that a large number of the male population are young men who have come to the capital in search of education or official positions. The number of "expectant officials" is estimated at 110,000—an element in the social life of the city which, while advantageous to the shopkeeping class, explains a good deal of the political unrest and some of the social evils which afflict the seat of Chinese government.

The Inroads of the West

Many and great changes have taken place in the material and economic conditions of life at Peking, especially since the capital became directly connected with the provinces by railways after the suppression of the Boxer rising in 1901. Before that upheaval, the terminus of the northern railway was kept at a respectful distance of four miles outside the Chinese city; to-day, the traffic of three trunk lines is carried right up to the Ch'ien Mén—the main gate of the Tartar city, within a stone's throw of the "Via Sacra," that leads

to the Forbidden City of the Dragon Emperor. The telegraph connects Peking with all the provincial capitals, and a telephone system has been installed, which affords communication of a kind with Tientsin.

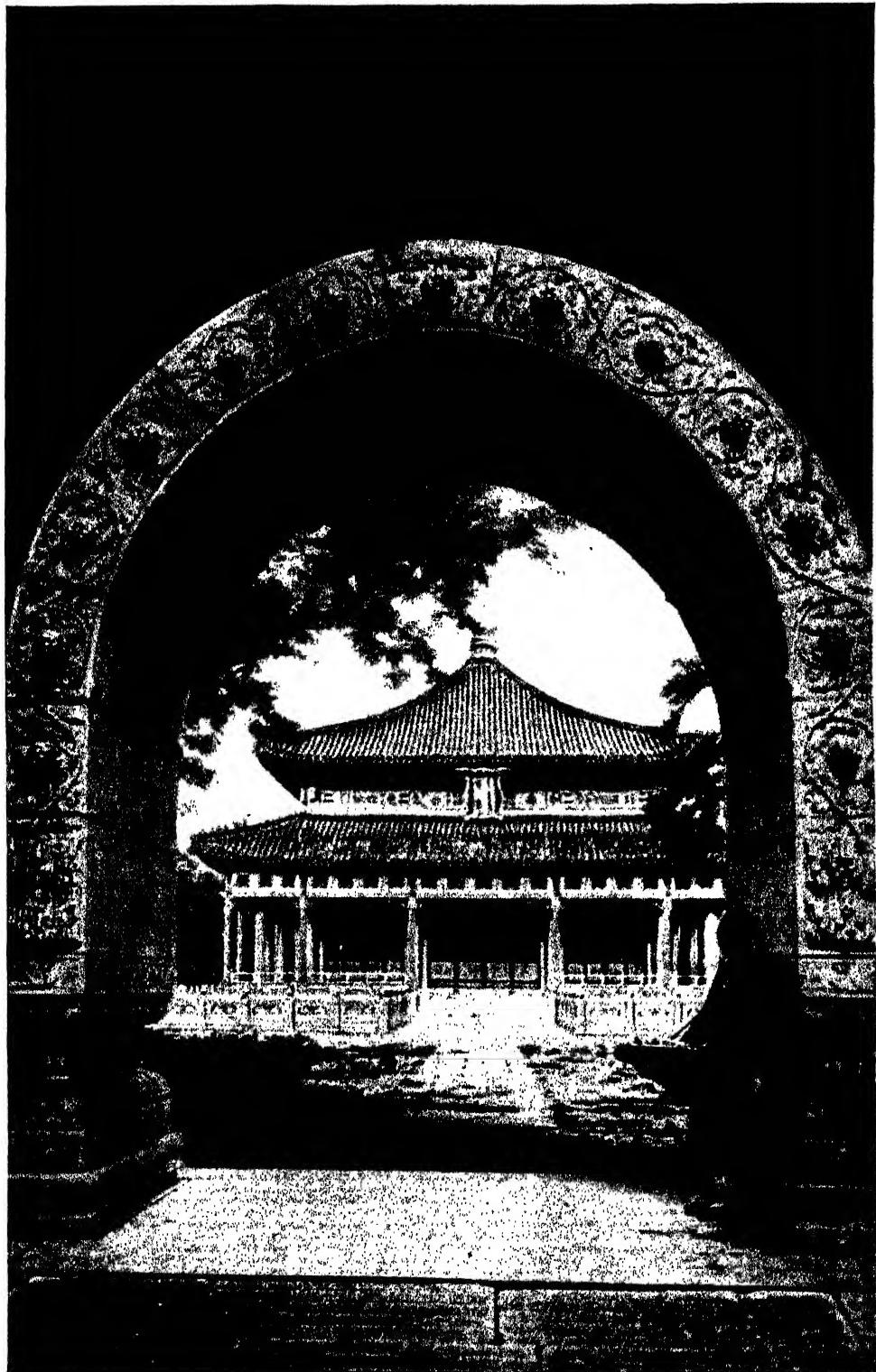
Eager to convince foreigners of their capacity for civic administration, the metropolitan government of the republic has carried out many long-needed improvements. Of these the most notable is a police force, modelled on Japanese lines, which works remarkably well, carrying out not only ordinary police duties, but those relating to the public health, census, fire department, and the administration of a number of benevolent institutions. The principal government offices and the House of Parliament have been provided with new Western-style buildings; the principal thoroughfares of the city have been paved, sanitary conditions improved, and four model prisons built.

Changes that are Superficial

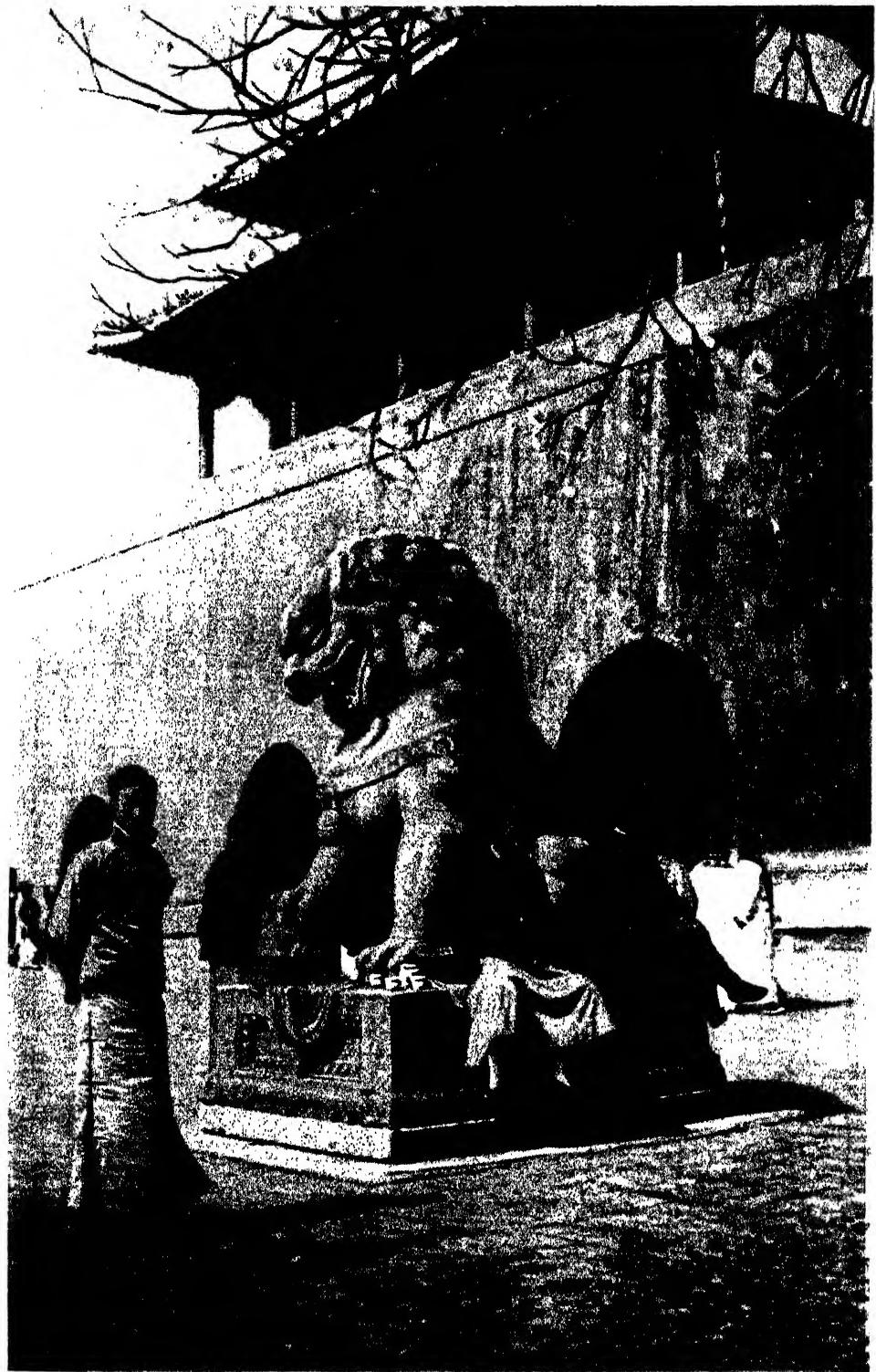
In spite, however, of all these manifestations of the modernising tendencies of foreign-educated officials and the powerful student class, native life in the byways, as distinct from the highways, of the capital reveals but little evidence of change. In the main streets, the motor-car of the modern mandarin has superseded the sedan chair and mule-litters of his forefathers; jinrickshas carry most of the passenger traffic; the householder is no longer allowed to dump his garbage on the sidewalk, and human scavengers have replaced the pigs and pariah dogs of former days.

But modern Peking, in a greater degree than modern Tokyo, remains for the older bourgeoisie an exotic and uncomfortable growth, inevitably associated in their minds with the triumphs of the alien invader, and the loss of many comfortable things that have disappeared with the Dragon Throne.

The people's pleasures, and the ways in which it takes them, afford instructive evidence of the conservatism of the old order and at the same time of its



PEKING. *In the grounds of the Hall of Classics are tablets on which are carved extracts of Chinese ethics and philosophy*

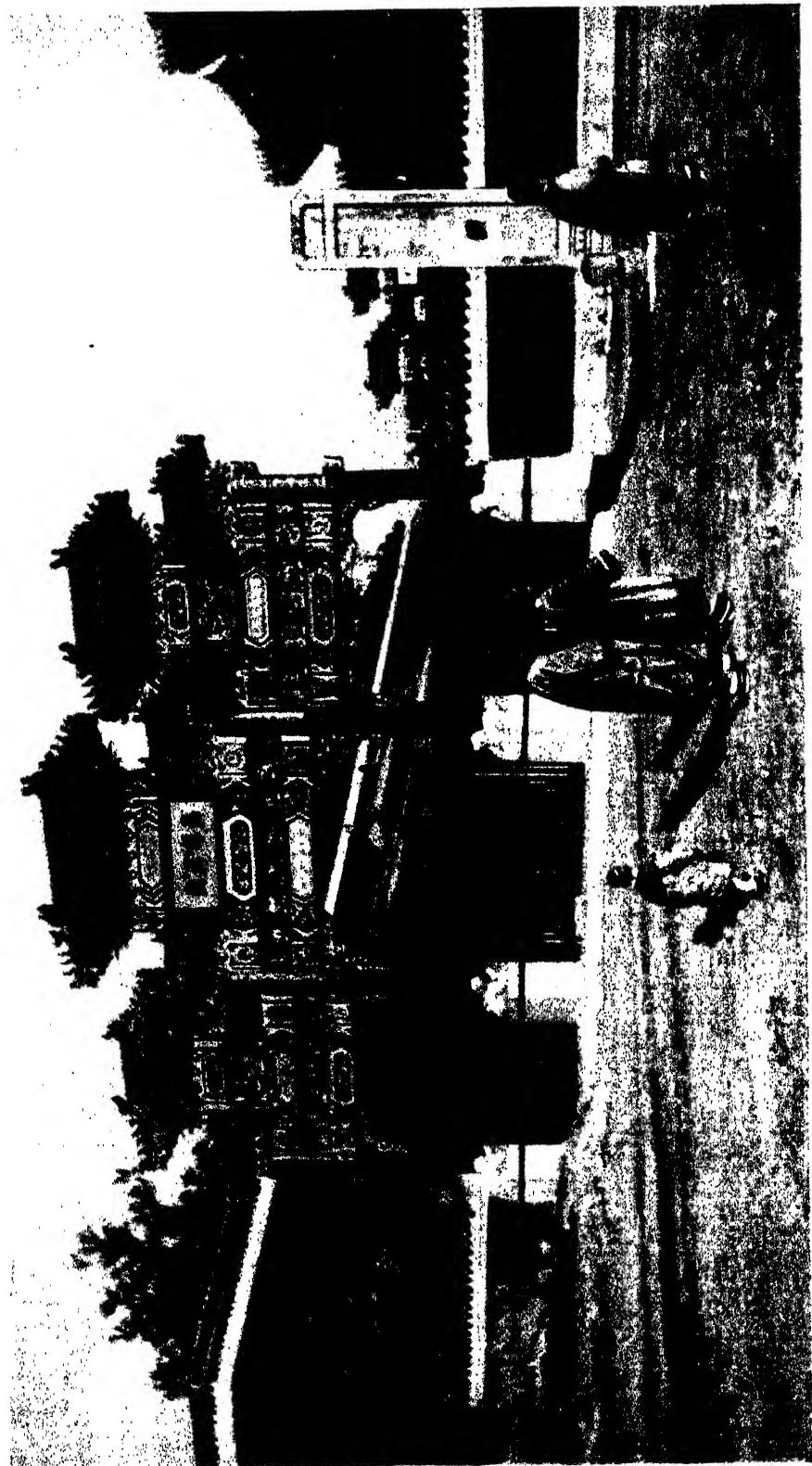


PEKING. A bronze lion, the Chinese symbol of courage and generosity, bares its fangs at the entrance to the former Imperial Palace



Underwood

PEKING. By the side of the steps leading up to the palace of the late Empress-Dowager are two splendid dragons with arched backs



PEKING. Memorial arches over the streets are often met with in the great city. This arch at *Tuuk* makes a fine blaze of colour in the sun with its wealth of red lacquer, bronze, copper and gilded ornamentation.

inevitable passing. As of old, the middle-class citizen of Peking seeks recreation at the theatre, and in feasts enlivened by the entertainment of singing girls and professional story-tellers; but the schoolmaster is abroad, and even in the privacy of the most old-fashioned restaurant his voice is plainly audible.

At many of the twenty odd theatres formerly devoted to classical drama and purely native comedy, the management has been compelled to defer to the taste of the younger generation for something modern on Western lines. Even the story-teller is being modernised, the Board of Education having recently brought pressure to bear on the Story-tellers' Guild, so that its racy tales of the legendary past may be made to point a moral suitable to the times and combine democratic education with medieval entertainment. The cinema (there are seven picture houses in Peking), a South City Amusement Park on the "Coney Island" plan, billiard saloons and foreign-style hotels, all serve to lead the bewildered citizen down paths of dalliance for which there is no guidance in the analects of Confucius.

Brocades and the Bowler Hat

Many of the striking features which made the street life of the capital so picturesque in the old days of its splendid isolation have disappeared as the result of the changes brought about by the Boxer havoc in 1900 and by the revolution of 1911. There is less colour and variety, less of the old-time flavour of mystery and romance in the scene, since officialdom discarded its embroidered silks and rich brocades for unsightly imitations of European clothes, since the Iron-capped Princes and their Bannermen became drab and dingy citizens and the sacred precincts of the palace were made free for democracy in a bowler hat.

The city has never recovered the appearance of dignified ease and well-being, the richly-decorated shops and other signs of solid prosperity, which distinguished it before its wealth was

burned and looted, first by the Boxers and then by the Allied armies, in 1900. Since the passing of the Manchus and the abolition of tribute-rice and other subsidies from the provinces, many of those who formerly lived on largesse from the Throne have been reduced to poverty; for the rest, the average citizen, taught in the hard school of adversity, walks more warily than of old, making no show of any wealth he may possess.

From the Top of the Tartar Wall

Nevertheless, to the traveller who possesses some knowledge of the history which confronts him in its monuments and shrines, and above all in the walls which enclose its four concentric cities, Peking remains a scene of rare and never-failing interest. From the top of the Tartar Wall, which forms the southern boundary of the Legation area, it presents a deeply significant pageant of history, set in a scene of great beauty. Seen thus towards evening, when the sun is sinking in clouds of glory behind an amphitheatre of purple hills, it looks like a city of parks and gardens, at the centre of which the Coal Hill, where the last of the Ming Emperors committed suicide, and the high curving, yellow-tinted roofs of the Imperial palaces stand out, as they have done for centuries, splendid and serene above the hidden life of the city.

Ground with Historic Memories

It is a place of crowded memories, historic ground, this stretch of the Tartar Wall, in the shadow of the Great Tower of the Ch'ien Mén. It was here that the foreign envoys who first took up their residence at Peking, after the capture of the city and the destruction of the Summer Palace by the British and French armies in 1860, were graciously permitted to take their daily walk, a thing impossible in the streets. It was here that, forty years later, the Sikhs planted their machine-guns, after forcing their way through the Water Gate to the relief of the Legations.



LINES OF RICKSHAWS AND STRANGE COVERED CARTS GATHERED ABOUT THE CH'EN GATE

Rickshaws are generally used for getting about in Peking, although automobiles are beginning to be regarded with a certain amount of favour. The Chinese carts drawn by the rather small local horses, are very uncomfortable according to Western ideas, as they are without springs. In the very narrow and crowded streets of the city palanquins have to be used. The walls of the city by the Chien Gate were demolished soon after the revolution, in order to give the traffic more space at what was formerly a very congested point, owing to there being a station on either side of Chien Men Street.

F. T. Wnyard Wright



COAL-YARD AND RAILWAY LINES beneath THE BATTLEMENTS OF THE INNER CITY

To the left are the Shunchih Gate and the chimneys of the government industrial factory which produces glassware, fabrics, embroidery, and also possesses a printing works. The walls of the inner city were built in the fifteenth century and are about 14 miles long, 40 feet high and 62 feet wide at the base. The walls of the outer city are only some 20 feet high, but are about 26 miles in length. Large areas of the outer city have not been built upon and many buildings have extensive grounds which give Peking an air of being a city of open spaces.

Ewing Galloway



Ewing Galloway

BEAUTIFULLY SCULPTURED GATEWAY OF THE YELLOW TEMPLE

North of the Anting Gate, which is in the north wall of the Tartar city, lies the Huang Szu, or Yellow Temple. The building is so named owing to its yellow tiles, though green and blue tiles have also been used. The temple comprises two structures, the earlier being erected in 1651, and was intended to serve as a residence for the spiritual heads of Buddhism.

To-day this section of the Imperial city's ancient bulwarks is under the military control of the Legation Guards. The American sentry on the wall, looking down on what was the Throne Hall of the Dragon Emperor, is an object lesson as sadly instructive in its way

as the proximity of the hideous railway-stations to the sacrosanct approaches to the Palace.

Immediately below the Tartar Wall are the stately buildings and barracks of the Legation Quarter, with its loopholed walls and glacis—an "imperium in



E. N. A.

STAIRWAY TO THE TEMPLE OF HEAVEN IN THE OUTER CITY

In an enormous enclosure within the Chinese city stands the Temple of Heaven, which consists of five altars. The one above is in the northern part of the enclosure. The triple roof is covered with blue tiles and is topped by a copper gilt ball, while the balusters and steps are of white marble. Here the emperors used to come to pray that the year might be prosperous

imperio" which fittingly symbolises the result of China's ever-reluctant relations with the Western world. Many of the sites included in the Legation area were once the homes of Manchu princes and nobles. None can compare in historical interest, however, with the Russian,

which stands on ground set apart for the use of the officially-recognized Russian caravans in 1698, and contains a church originally built by the Manchu government in 1729 for the use of the orthodox ecclesiastical mission established under the Kiakhta Treaty.



LIFELIKE LAUGHING BUDDHA

In the neglected Buddhist temples about Peking there are many works of art depicting Buddha as partaking of human emotions. Buddhism is now decaying in China

North and west of the Legation area stretches the Imperial city, about two square miles in extent, surrounding and protecting the Forbidden City of the Son of Heaven, the stately palaces that once housed the emperor and his court within their enclosure of purple-tinted walls. At the centre of the Forbidden City, facing due south, stands what was once the Hall of the Dragon Throne, the very heart and apex of China's patriarchal Confucian system.

To-day the shrine is void and the emperor has joined the mournful company of monarchs dispossessed. The president of the Chinese Republic and his suite now occupy the buildings around the two southern "Seas" (artificial lakes) of the Winter Palace in the Imperial City, looking out on the "Ocean Terrace" island, where the late Emperor Kuang Hsü was interned under restraint by his aunt, the Empress Dowager Tzu Hsi, after the coup d'état of 1898. Space does not permit of a detailed description of the beautiful buildings and interesting monuments contained within the precincts of the Forbidden City and the "Sea Palaces," nor a critical appreciation of these

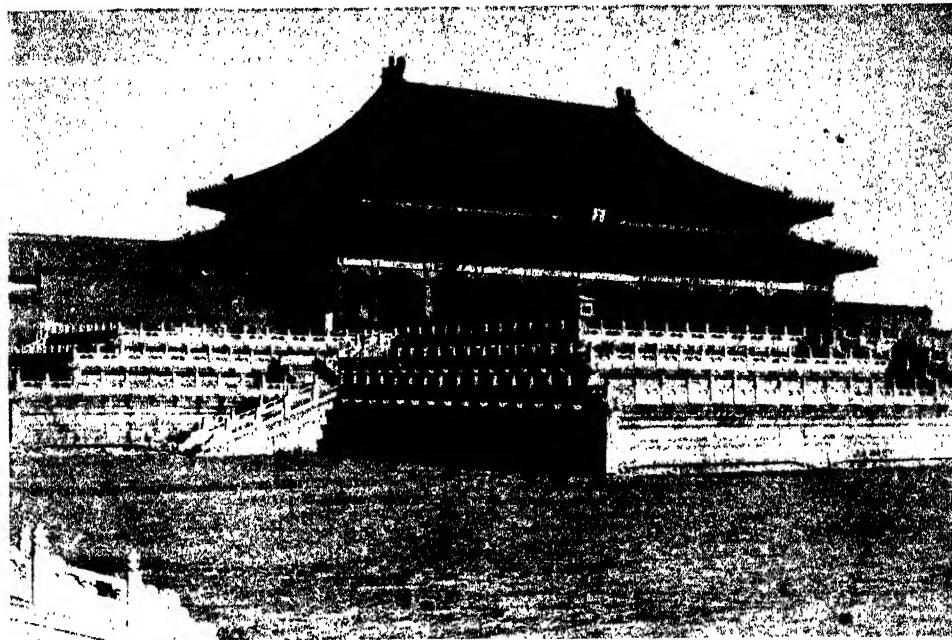
marvellous Imperial pleasure grounds with their rock gardens, dainty pavilions, lotus lakes and graceful bridges, all in perfect harmony of colour and design.

To the Ming emperor Yung Lo belongs most of the credit for thus recording in wood and stone the ethical and aesthetic ideals of the East at their noblest and best; nevertheless, it is not his memory, but that of the great Empress-Dowager Tzu Hsi, which survives to-day in every lovely prospect of the Imperial domains. Every building in the "Sea Palaces," every notable feature of the scene, from the state barges on the lake that she loved so dearly, to her private theatre and the throne room where she died—all are filled with memories of the illustrious sovereign who ruled China for half a century so bravely and so well.



GUARDIAN OF A TAOIST TEMPLE

These fierce-looking images are to be seen at the entrances of Taoist temples to frighten away evil spirits. Many observances of Taoism have been borrowed from Buddhism



Ewing Galloway

"THRONE ROOM OF SUPREME PEACE" WITHIN THE "FORBIDDEN CITY"

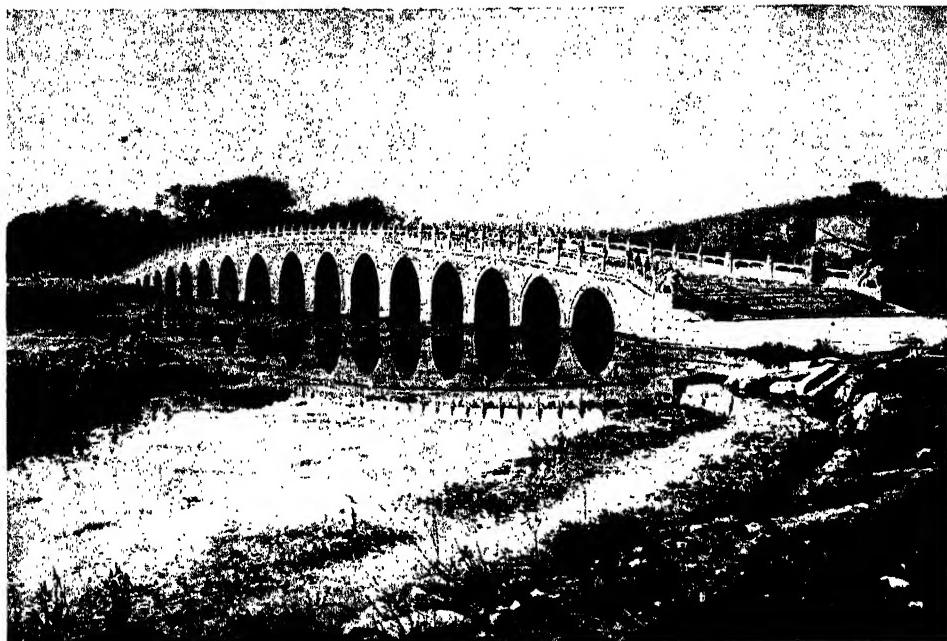
The "Forbidden City" comprises what was formerly the Imperial Palace. Five flights of steps lead up to the throne room, which stands on a terrace enclosed by a balustrade of white marble. The room is styled the T'ai-ho Tien; and here the emperor came to hold his court on New Year's Day and to receive congratulations on his birthday. Behind is a hall used for Imperial religious services



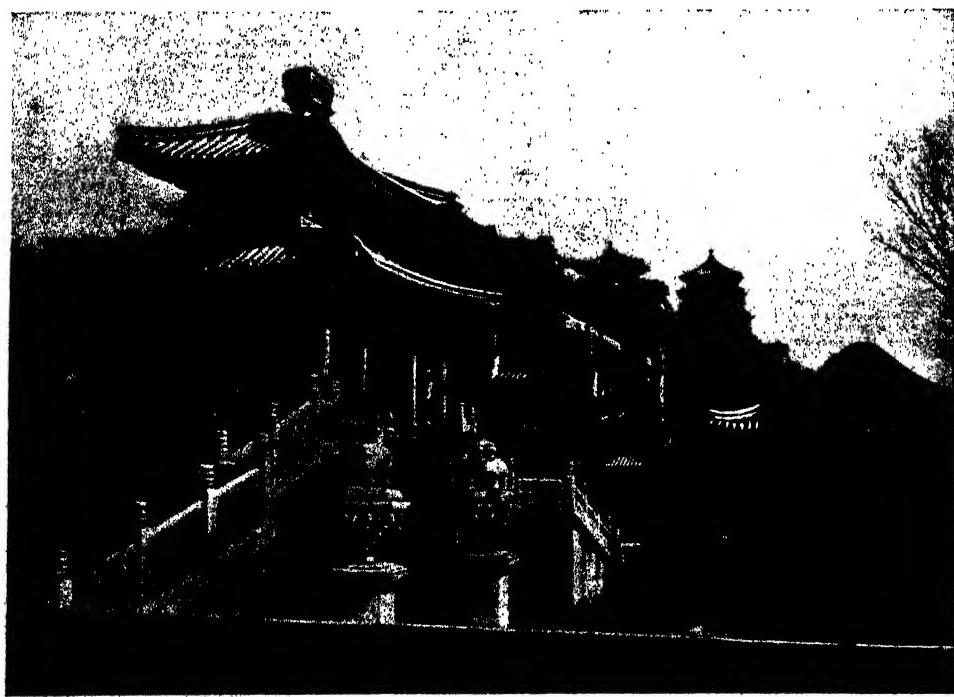
Ewing Galloway

PREPARING A LARGE CATAFALQUE FOR A FUNERAL PROCESSION

Elaborate catafalques are often to be seen in the funeral processions of the wealthy or noble. They are usually carried by eight or ten coolies, and the procession is headed by musicians, the relatives and friends of the deceased following the bier dressed in white. Lamentations play an important part in Chinese mourning; the men and women weep much and wail and howl vigorously

**WHITE MARBLE BRIDGE IN THE GARDENS OF THE SUMMER PALACE**

A road runs round the lake in the grounds of the former Summer Palace, and from it a magnificent bridge with seventeen arches leads to an artificial island in the lake. This island was built on marble foundations and is covered with rockwork in which caves and grottos have been made. There are also several pagodas, a guardhouse and a pavilion for the emperor upon the island.

*Ewing Galloway***PAVILIONS AND TEMPLES OF THE SUMMER PALACE AMID' THE TREES**

Some of the bridges over the many canals are so steep that they can only be ascended by means of steps. On the one above, which is supported by marble pillars surmounted by lions, a shelter with a double roof has been built. The canals appear to have been constructed without a definite plan, widening, narrowing and winding in a haphazard way and crossed by bridges of charming designs.

Farther to the eastward along the Tartar Wall, beyond the gate of Sublime Learning, stands the famous observatory on a site first used by Persian astronomers at the court of Kublai Khan. There may be seen the bronze azimuth and globe brought by Jesuit priests as gifts from Louis XIV. to the Emperor K'ang Hsi, and other instruments. Some of these were removed to Potsdam by order of the German Emperor after the

where formerly was stored the tribute rice, on which the Bannermen were wont to batte in dignified ease.

Other monuments and shrines of perennial interest are the Drum Tower and Bell Tower in the north of the Tartar city—the former dating from 1262 A.D.; the great White Dagoba, a beautiful monument built in 1652 to commemorate the coming of the first Dalai Lama from Tibet to Peking; the



MARBLE BOAT ON THE LAKE OF THE SUMMER PALACE

Ewing Galloway

About 11 miles north-west of Pekin there lies the Summer Palace. The buildings rise in terraces on the side of a hill to the south of which lies the lake on which is the intricately carved marble boat. The palace consists of a number of villas and halls, but many of the original buildings were destroyed in 1860, the present structures being erected by the late Empress-Dowager

Boxer débâcle, and have since been restored by the Treaty of Versailles.

From the terrace of the Observatory two melancholy relics of changing China are visible—the scattered ruins of the old Examination Halls, where until the beginning of this century all the first-class brains in China competed every third year for the highest literary degrees and opportunities of wealth and fame in the public service, and the dilapidated buildings of the Imperial Granaries,

Lama Temple, near the North Wall, with its large community of priests and impressive Buddhist services, the spiritual home of Mongolian life in North China; and, above all, the shrine of Confucius, with its beautifully proportioned "Hall of the Great Perfection," fittingly representative in its dignified austerity of China's philosophy and of the sage whose teachings laid the time-defying foundations of her culture and civilization.



C. F. J. Galloway

STREET IN KAZVIN DECORATED TO WELCOME THE SHAH

Kazvin stands on one of the great caravan roads about 90 miles north-west of Teheran, and for a short period during the sixteenth century was the capital of Persia. Many of the fine buildings which it formerly contained have been destroyed by repeated earthquakes. The city and province are celebrated for their fine breeds of camels and horses. Cotton goods are manufactured and raisins exported.

PERSIA

A Medieval Land in Modern Times

by Sir Percy Sykes, K.C.I.E.

Author of "Ten Thousand Miles in Persia"

PERSIA occupies the western and larger portion of an extensive and elevated plateau, situated between the low-lying valley of the Indus to the east and the equally low-lying valley of the Tigris and Euphrates to the west.

The eastern portion of the plateau contains the state of Afghanistan and the desert province of Baluchistan which, until the eighteenth century, generally formed part of the Persian Empire. This Iranian plateau, as it is termed by geographers owing to Persians terming themselves Iranians (which is a form of the more familiar word "Aryan"), was especially fitted by nature to be the home of a powerful state, as is proved by the fact that the Persian Empire, which was founded by Cyrus the Great in 550 B.C., is still in existence to-day, albeit shrunk to a minor measure.

The virility of mankind is mainly a matter of climate, and as Persia lay high, with its chief centres situated at an altitude of some 5,000 feet in the south and of 3,000 feet in the north, its warriors would naturally dominate the inhabitants of the rich valleys of Mesopotamia and the lowlands, whose inhabitants were weakened by a climate that was, in general, hot and enervating.

How Geography Can Make and Break

Apart from the important question of climate, Persia is surrounded on every side by high mountain ranges, which serve alike as a protection and an aid to the formation of an homogeneous nation. On the other hand, inaccessibility from the Caspian Sea and from the Persian Gulf has brought with it

grave disadvantages, hindering commerce and intercourse of every description from the north and from the south.

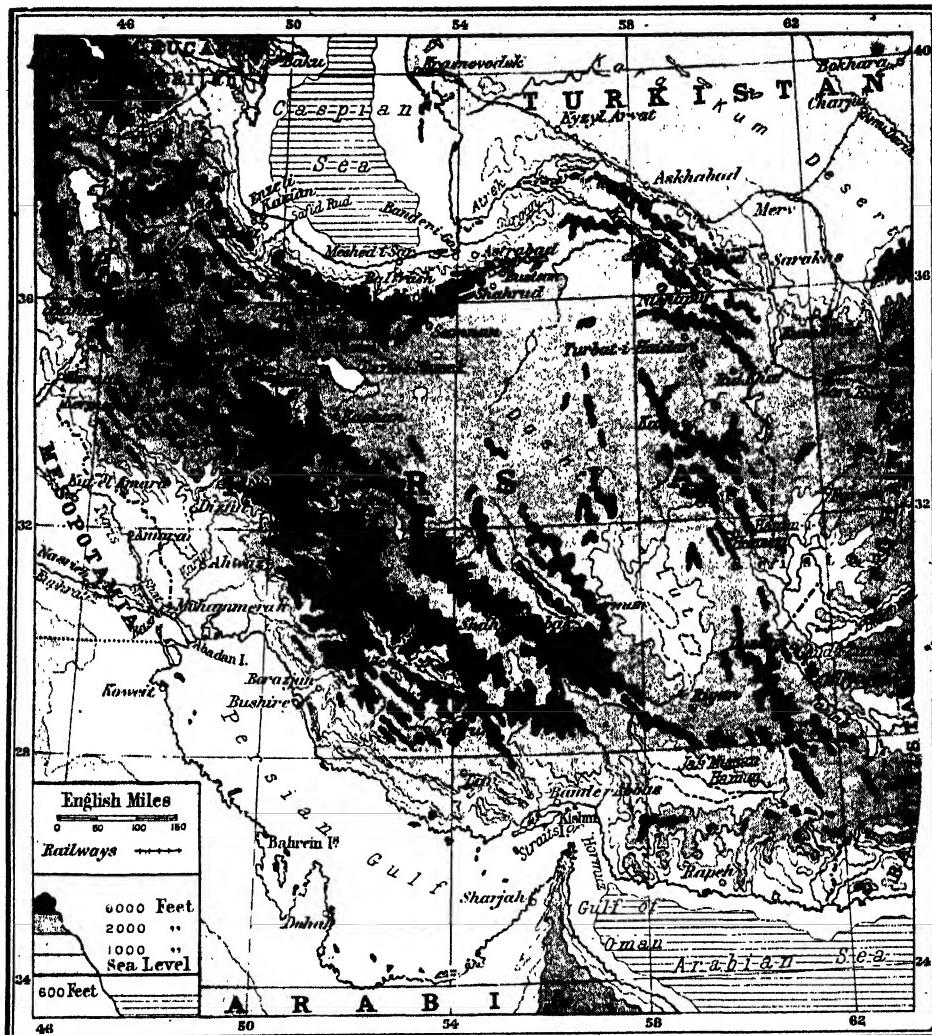
It is to be noted that, in the times of her greatness, when Persia stretched from the Sir Daria to the Mediterranean Sea, trade and intercourse were carried on by caravans, and silk, for example, was brought on camels from China to the Roman Empire. There was little sea-borne commerce, and Persia lying athwart the caravan routes, which ran east and west, was enriched at every stage by purchases of food and fodder, quite apart from the profits of her merchants and of the state. To-day sea-borne commerce has sapped the prosperity of Persia—and shrunken cities along these old-world routes tell the tale in unmistakable language.

A Survey of Persia's Boundaries

Persia is a vast country, measuring 700 miles from north to south and 1,000 miles from east to west, and we will commence our survey of its boundaries at the north-east corner, where the province of Khorassan is protected by a series of high ranges that dominate the steppes of Central Asia.

Farther west, the rich valley of the Gurgan, the classical Hyrcania, has been left to Persia by Russia, and the boundary is the lower reach of the Atrak to the point where it discharges into the Caspian Sea.

Continuing our survey westwards, Azerbaijan is very mountainous, its ranges culminating in Ararat, where the boundaries of Russia and Turkey were met. The western frontier consists of a series of parallel ranges, which hold up the plateau in this section, but



DESERTS, VALLEYS AND MOUNTAINS OF THE IRANIAN PLATEAU

include the fertile valley of the Karun, the only navigable river of Persia, which flows through the ancient state of Elam.

The Persian Gulf washes the coast as far as the Strait of Hormuz; and the province of Persian Baluchistan borders on the Arabian Sea. The eastern boundary, running north from the coast, marches with British Baluchistan for some hundreds of miles.

The fertile district of Seistan is divided between Persia and Afghanistan, but, farther north, there is a desert section that is still unsettled, until, near the point where the Hari Rud makes a great bend northwards, that river constitutes

the frontier, remaining the boundary to Sarakhs, the starting-point of our survey.

The great northern range of Persia runs approximately from east to west. South of the Caspian Sea the Elburz range presents an imposing barrier averaging some 12,000 feet, but it is completely dwarfed by great Demavend, which rises in a graceful cone to 18,000 feet. In the ancient religion of Zoroaster, Demavend was the paradise, with its summit bathed in everlasting glory, where, according to his teaching, there was no night, no disease and no death.

This idealisation of the highest mountain in Asia west of the Himalayas

appeals deeply to me, for in midwinter at Teheran I have watched the rosy light of the setting sun glorify its snow-covered peak until at last only the top of the cone is still touched with colour. There is then a flicker, and the beautiful volcanic peak becomes cold and dead.

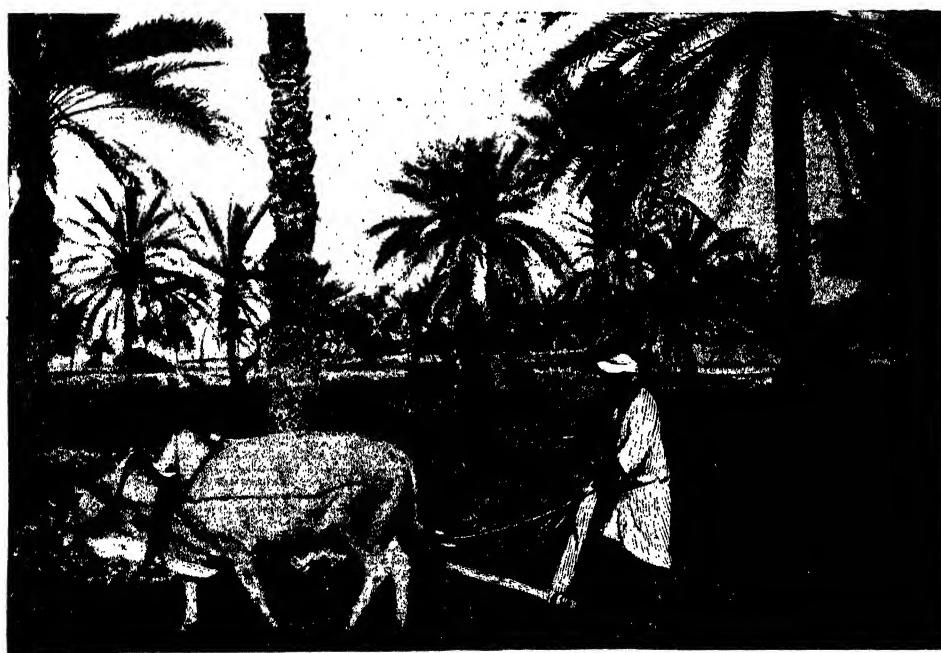
The series of ranges on the western side all run to the north-west. This was once the country of the Medes and Persians before they set out to conquer the known world, the south-west province being Pars, or Fars, whence is derived our word "Persia." Eastwards, in the province of Kerman, there is a group of mountains which exceeds 13,000 feet to the south of the city bearing the same name.

The centre of Persia is one vast desert stretching from the neighbourhood of Teheran to the deserts of Baluchistan, which only end in the neighbourhood of Quetta. In the northern area, owing to the large amount of water which flows in from the

main range, there are huge salt swamps. These constitute a terrible source of danger to caravans which are overtaken by rain when crossing them.

Elsewhere there are vast areas covered with sand dunes that move and obliterate the track. Here the dreaded simoon or "poison wind" blows, and hundreds of pack animals, not to mention their drivers and other travellers, succumb to thirst annually. The name for this waste in the eastern and southern portions is Lut, the word being the correct Arabic form of the name of the patriarch whom we term Lot, and there are legends of cities of Lot destroyed by fire, just as in the vicinity of the Dead Sea, which the Arabs term the "Sea of Lot."

The Persian Gulf, as already mentioned, washes the western coast of Persia in its southern section. This landlocked body of water is 700 miles in length, with a width that may average about 100 miles. It is entered from the Arabian Sea



Sir Percy Sykes

PLOUGHING IN A GROVE OF DATE PALMS NEAR BANDER ABBAS

Ploughing is still done in Persia with a simple wooden ox-drawn plough that barely does more than tickle the surface of the earth. Bander Abbas is a port situated at the entrance to the Persian Gulf opposite the island of Kishm. It was known to English merchants of the seventeenth century, under the name of Gombroon, and carries on a fairly large trade with Bombay and Karachi.

through the Strait of Hormuz, which is only 30 miles wide.

The Caspian Sea, which washes the northern provinces, is 600 miles in length and half that distance in width. It has formed a number of lagoons along the Persian coast, and on the spit of Enzeli, and at Gazian on the opposite side, are landing-places for Resht. The Russian Steamship Company erected wharves at Gazian and maintained a dredger, and a road company constructed a road through the malacious marshland to Resht and

the sea. The Karun, which has already been referred to, is merely a tributary of the latter river.

The longest river is the Kizil Uzun, which, rising in the vicinity of Lake Urmia, cuts through the Elburz, and under the name of the Safid Rud discharges its silt-laden waters into the Caspian Sea. Other rivers, such as the Zenda Rud, on which Isfahan stands, discharge into inland "hamun," or lagoons. The most important lake is that of Urmia, which, like other lakes in Persia, is very saline. There is also



H. F. Gandy

MOUNTAINS ABOVE THE ROAD FROM TEHERAN TO MESHED-I-SAR

Meshed-i-Sar lies on the Caspian Sea about 100 miles north-east of Teheran and is the terminus of a caravan route which winds through the splendid scenery of the Elburz mountains. On this road is the town of Balfrush of which Meshed-i-Sar is the port. Many of the roads in Persia degenerate into nothing better than tracks after leaving the towns

the capital, but Bolshevism has blighted this enterprise, at any rate for a time.

There is a second harbour at the south-east corner of the Caspian Sea, where Bander Gaz serves Astrabad and Meshed. I retain most unpleasant recollections of landings at all these ports, and nowhere does the inefficiency of Persia impress itself more than at her water-gates.

Owing to the scanty rainfall there are few rivers in Persia. Indeed, between the Indus and the Shat-el-Arab not a single river of any importance reaches

the fantastically shaped lake of Niriz in the south.

Everywhere the prevailing note is aridity. The mountains are devoid of timber and are sharply serrated, the valleys are even more bare, the scanty bushes being dug up for use as fuel, to the grave detriment of the camel grazing. I have recently visited Arizona, which arid state resembles Persia in almost every particular, from its dry, serrated ranges and its steppe vegetation to its dry, exhilarating climate. Very little scientific research has been



Sir Percy Sykes

MAIDAN-I-SHAH AND DOME OF THE ROYAL MOSQUE AT ISPAHAN

On the south side of the Maidan-i-Shah is a lofty gate decorated with blue tiles, which gives access to an inner court. From this court the mosque is entered by another gateway, flanked by minarets. The mosque is embellished with glazed tiles and gold and silver ornaments. Ispahan was the capital of Persia in the seventeenth and eighteenth centuries and one of the greatest cities in Asia.



E. N. A.

TEHERAN: THE PARLIAMENT HOUSE, ONCE THE BAHARISTAN PALACE

Close to the Sipah Salar Mosque in the newer portion of the city is the Parliament House, one of the finest buildings in Teheran. It was erected in 1879-81, and is ornamented by tiles of various colours. The first national assembly was held here in 1907, and after the revolution in 1909 the structure was altered to make the interior more suitable for a house of parliament.

Sir Percy Sykes



LITTLE VILLAGE OF KUPKAN UPON A HILL IN A DESOLATE VALLEY OF KHORASSAN

Hidden away in a valley among the wild mountains that form the frontier between the Persian Province of Khorassan and Turkistan is this group of mud houses. From this village came Nadir Shah, a robber chieftain, who became the Shah of Persia. He sacked Delhi and went from triumph to triumph, only to be murdered by his own guards. Khorassan is chiefly comprised of highlands, sterile plains and some fertile upland valleys. In the last cereals, tobacco and fruits are grown, though many of the villages are so remote from the centres of trade that only sufficient is produced to meet the local requirements.

carried on in Persia, and her soil has hitherto been neglected. The fact is that land is abundant, and that it is the irrigation water which is the decisive factor. Observations have been made by the British at a few centres for perhaps two or three decades, and we know that Teheran and Meshed, in the north, have a precipitation of just under 10 inches, whereas Ispahan has less than five inches; the rainfall at Bushire is 11 inches. In view of the low latitude and the immense power of the sun, this small precipitation implies an arid, semi-desert country, covered with steppe vegetation, which could hardly support any settled population but for the part played by the mountains.

Invigorating Changes of Weather

Fortunately the snow and rain usually fall in the winter and spring when the moisture is most needed by the farmers; and in the north, in favourable seasons, grain crops are reaped in the hills that are independent of irrigation.

From the point of view of the resident, the climate is delightful. During the summer and autumn week succeeds week of bright, sunny weather. It is, indeed, very hot out of doors in the middle of the day, but otherwise pleasant and cool. The cold in winter is sometimes intense, readings below zero being registered, but here again the brightness and dryness make the winter invigorating and stimulating.

The prevailing wind is from the north-west and the winter storms invariably originate in this quarter. In other words the storms come from the Atlantic up the Mediterranean Sea and are attracted to India by the warmer atmosphere of the lower latitudes.

In the lowlands bordering the Persian Gulf the climate is detestable. It is dangerously hot for four months in the year, the residents having to endure an extreme aridity, so that health is impaired, permanently in many cases. The inhabitants of the provinces bordering on the Caspian Sea suffer even more than those of the Persian Gulf,

where the aridity is an advantage from the health point of view.

The Caspian provinces have a rainfall of 50 inches, and the country is marshy and waterlogged near the coast, while the mountains are covered with dense forest and scrub. The result is that these provinces are most unhealthy owing to malaria and other fell diseases. So much so is this the case that the saying runs: "What crime had he committed that he has been appointed governor of Resht?"

Barren Tract from Africa to Asia

In the eastern hemisphere there is a broad belt of desert which runs across Northern Africa to Asia, where the wastes of Arabia continue it to the borders of Persia. The fertile mountain ranges break it, but the Lut extends across Persia, and with another break for the mountain ranges of the northeast the Kara Kum or "Black Sand" is reached. On the Persian plateau there is a green flush of grass for a few weeks in the spring, but for the rest of the year the ground is scantily covered with low bushes which afford good grazing for camels.

The vegetation is typically of the steppe order. At the same time, owing to the vast extent of the uncultivated area, there is an abundance of fair grazing for sheep and goats.

The Desert and the Sown

In the quatrains of Omar Khayyam, we read:

"With me along the strip of herbage strown,
That just divides the Desert from the Sown."

This word "Desert" signifies the uncultivated area and from it, in addition to the grazing, the peasants collect fuel and certain products, to wit, mushrooms, edible thistles, rhubarb, caraway seeds and tragacanth gum. Manna, too, exudes from a species of tamarisk and is the favourite sweetmeat, besides being highly esteemed by the



Sir Percy Sykes
ROCKY GORGE THROUGH THE WILD MOUNTAINS NORTH OF MESHED

These mountains are termed the range of the Hazar Masjid or One Thousand Mosques. Meshed is the capital of Khorassan and is regarded as a sacred city by the Shiah Mahomedans, as it contains the tomb of the Imam Riza, the son of Ali and a grandson of Mahomet. It trades in carpets, shawls and silks, but owes its prosperity mainly to the pilgrims who visit it annually in vast numbers.

*Sir Percy Sykes***WASHING TURQUOISE MATRIX AT THE MINES NEAR NISHAPUR**

About 30 miles north of Nishapur are the celebrated turquoise-mines. The matrix is washed in water by men and boys until it has been freed from the clay. It is then packed into skins and sent to Meshed. The men with sticks superintend the washing process in order to see that no stones are taken by the washers. No modern machinery has yet been introduced into the mines.



Sir Percy Sykes

FAMILY OF NOMAD TURKS WITH THEIR CAMELS AND HORSES ON THE MARCH NEAR KUPKAN

Nomadic tribes of Turkish origin in Khorassan spend the hot months in the cool uplands and when winter approaches they move down into the lowlands, where they sow crops in the spring. Each tribe follows the same route year after year, and this custom has provided a certain number of roads. Sand storms of great violence are often encountered and sometimes destroy whole caravans; huge swamps are also found in the plains, and have to be avoided. Many of the nomadic tribes plunder villages near their route or attack small parties, and the government, at present, is too weak to enforce obedience upon its lawless subjects.

Persian faculty. Finally, the malodorous assafoetida, which is greatly prized in the Indian bazaars as a stimulant, constitutes a source of wealth to the collector.

On the plateau, then, there are practically no forests but, in the Caspian provinces, nature is lavish in her bounty with elms, oaks, beeches, maples, limes and the valuable box-tree. Wild vines festoon the trees and there are ferns and mistletoe, primroses, violets and snowdrops. The flora is that of the Caucasus, its intense luxuriance being due to protection from cold and to the abundant moisture.

The fauna of Persia is especially varied and interesting. It includes the tiger of the Caspian provinces—the "Hyrcan tiger" of Shakespeare—while there used to be lions in the south-west provinces. In the north there is the "arctos" bear and in the south the "syriacus." Leopards, wolves, hyenas, lynxes, wild cats, foxes and jackals may be found all over the country.

Animals, Wild and Domestic

Superb stags roam the forests of the Caspian provinces and fallow deer are hunted in the western ranges. But the most abundant quarry, found at every altitude, is the wild sheep and the ibex, which give excellent sport. Wild boars, which are not hunted for their meat owing to Moslem prejudice, are also abundant and do much harm to the crops. On the plains there are herds of gazelles, and the wild ass haunts the salt swamps.

The Aryan ancestors of the Persians introduced the horse to this part of Asia, and the Nisaeon strain, bred in the western ranges, became famous throughout the known world. The cattle, small and underfed, are used for milking and for the plough. The humped species is found in Seistan and also in the Caspian provinces, as is the buffalo, which does not thrive on the arid plateau. The fat-tailed sheep, the supreme sheep of Persia, uses its tail,

which weighs as much as sixteen pounds in the spring, as a banking account on which to draw during the lean months.

There is but one species of goat, and from it valuable down is procured. The one-humped camels of Khorassan are famous for their size and strength; and dromedaries or "running camels," are bred in Persian Baluchistan.

Game Birds Innumerable

Of game birds, there are bustards of three species and pheasants in the swamps of the Caspian provinces. The red-legged partridge and the little sand partridge are found everywhere, as also are sandgrouse of three species, while duck, snipe and quail visit Persia in the season. Pigeons are plentiful and a great standby to the traveller.

Birds of prey are numerous and include the eagle, the vulture and hawks of different species, which Persian gentlemen keep for hunting. The bee-eater, the hoopoe and the bluejay mark the advent of spring; and the crow, raven, chough, magpie, starling, lark and wagtail are found everywhere. The nightingale, the thrush and the warbler are less common. In the Caspian provinces and in Seistan many different kinds of water birds may be seen and heard. Their numbers are so great that when they rise off the lakes the noise resembles the beating of heavy surf on a rock-bound shore.

Harvest One Year in Five

Agriculture, as already mentioned, depends mainly on irrigation, although an abundant rainfall or scarcity in the spring makes a great difference both directly on the crops and indirectly on the springs in the mountains. Land is not, as a rule, cropped more than one year in five in the plains, but it is used every year in the mountains. Manuring is not practised as much as it should be, but in some districts the sheep are used to manure the land by night and stable manure is also utilised. Locusts are a great curse and

I have seen fine crops destroyed in the course of a few hours by this terrible pest. Owing to the enormous area of desert, it would be very difficult to cope effectively with this plague.

Ten Acres to a Sheep

Dry farming might be attempted in Persia under expert supervision in suitable districts, but the country is in the power of dictators who take every available "toman" for the army on which their power is based. Not that a force is superfluous in such a bandit-stricken country, but, until the people flourish, there can be no relief from robbery, which is, in a large measure, the result of misgovernment.

Persia has vast grazing areas, but it takes perhaps ten acres to graze a sheep, consequently one quarter of the population is nomadic:

The main crops are wheat, barley, which is the staple horse-food, millet, beans, cotton, opium, lucerne clover and tobacco. Sesame and other oil seeds grow everywhere, as do onions, beetroot and turnips. Rice and maize are chiefly grown in the Caspian provinces and in the lowlands. Potatoes, cabbages, cauliflowers, artichokes, tomatoes, cucumbers, spinach, egg-plants, lettuces and radishes are the chief vegetables, but potatoes are not grown as much as they should be considering their extraordinary food value; and other vegetables are sometimes mainly grown to sell to Europeans.

Persia's Far-famed Fruits

Persia is rich in fruit. Pears, apples, quinces, apricots, plums, peaches, cherries and mulberries are grown everywhere on the plateau. Figs, pomegranates, almonds and pistachios are grown in the less cold districts, while dates, oranges, lemons and limes only flourish in the lowlands. The grapes and melons of Persia are famous, but, generally speaking, the fruit is badly grown. It is of some interest to note that Europe has received many of her fruits, vegetables and flowers from

Persia, chief among them being the peach, the orange, the lime, the pistachio nut, spinach, lilac, jasmine and narcissus, all of which have retained their Persian names.

It appears that, in the late cretaceous period, most of Persia was under the sea. An important exception was that there was a strip of country which ran across what is now the Strait of Hormuz into north-west Persia and the Caucasus. In the miocene period movements of the sea-floor separated portions of the Persian water area from the main body of the ocean, converting much of it into inland seas and lakes, which, by their evaporation, produced the great beds of salt and rock-gypsum that are so characteristic. Persia, at this period, was cut off from Europe, and it was not until the very end of the Miocene period that land connexion was made and allowed land fauna to migrate from Asia to Europe.

Development Waits on Transport

Persia, so far as is known, is not rich in minerals that can, at present, be worked at a profit. This is due to the absence of railways and rivers and also, in a lesser degree, to lack of water-power and timber. Fortunately, Persia is rich in oil-bearing strata; indeed, it appears that there is oil everywhere between Baku and the Persian Gulf.

The Anglo-Persian Oil Company has its chief borings at Maidan-i-Naftun, situated 100 miles to the east of the junction of the Karun with the Shat-el-Arab. A pipe-line runs from the wells to the Karun near Ahwaz and then follows it down to the island of Abadan, which is situated a few miles below Mohammerah. Apart from oil, coal is mined near Teheran and copper near Nishapur, and the turquoises of Persia are celebrated. In the Persian Gulf, where water transport is available, red ochre, sulphur and salt are worked.

There are very few factories in Persia. The sole industry is carpet-weaving, which is mainly carried on in the tents of the nomads, the products of whose



Sir Percy Sykes

VILLAGERS UPON A ROAD IN THE PROVINCE OF KHORASSAN

Above are seen women and children of a village in the district about Nishapur. The landscape affords one a glimpse of the untilled wastes of Persia. A plain covered with stones and stunted bushes or coarse grass stretches away to the hills upon the horizon, and in the foreground is a caravan route that has been marked upon the face of the land by many centuries of use



H. F. Cawley

FLOUR MILL IN A VALLEY AMONG THE ELMURZ MOUNTAINS

Wheat, barley and rice are cultivated everywhere except in the most arid regions. Wheat and barley can be grown up to an altitude of nearly 8,000 feet. Flour mills are to be found near large villages among the hills, but in many households the grain is ground daily by the women. In the photograph a millstone is shown to the right of the door of the mill.

looms are so highly prized in Europe and America. The girls are all taught weaving and, until they are capable of producing good carpets, they are not considered to be fit to marry.

Costly Handling of Imports

Commodities are handled at the ports by "dockers," who have practically no mechanical aids. In the open roadsteads of the Persian Gulf, ships cannot approach within two miles of the shore, and goods are transferred from the steamers into native craft which come alongside the pier, if there is one, or else, in turn, transfer the goods into rowing-boats. The cost and heavy loss entailed by these primitive methods are a serious hindrance to progress.

The most capable class in Persia, as in most countries, is that of the merchants. They are in relatively close contact with Europeans, and therefore acquire some knowledge of modern methods. The amount of goods in the bazaars is very small, so much so that a merchant tries to charge a higher rate for a large order on the grounds that the commodity will become scarce and that he ought to benefit by the fact. Another difficulty is that when it is known that a large caravan of sugar, for example, is due, the price will decrease to such an extent that there will be no profit for the importer.

Rogues of the Market and the Road

To set matters right, the merchant will arrange for a local brigand to seize the whole caravan and, upon the news of the robbery reaching the bazaar, the price of sugar will suddenly rise in anticipation of a famine. The merchant's sugar will then be secretly brought into the town, a few loads at a time, and he will reap a rich profit, in which the obliging brigand will share.

There are few Persians who understand banking, but native "sarrafs" will change money or give bills. The Imperial Bank of Persia has rendered invaluable services to the Persian government and to Persian commerce.

This British company has the monopoly of issuing banknotes and the "sarrafs" frequently collect a large quantity of them and organize a run on the hated rival institution.

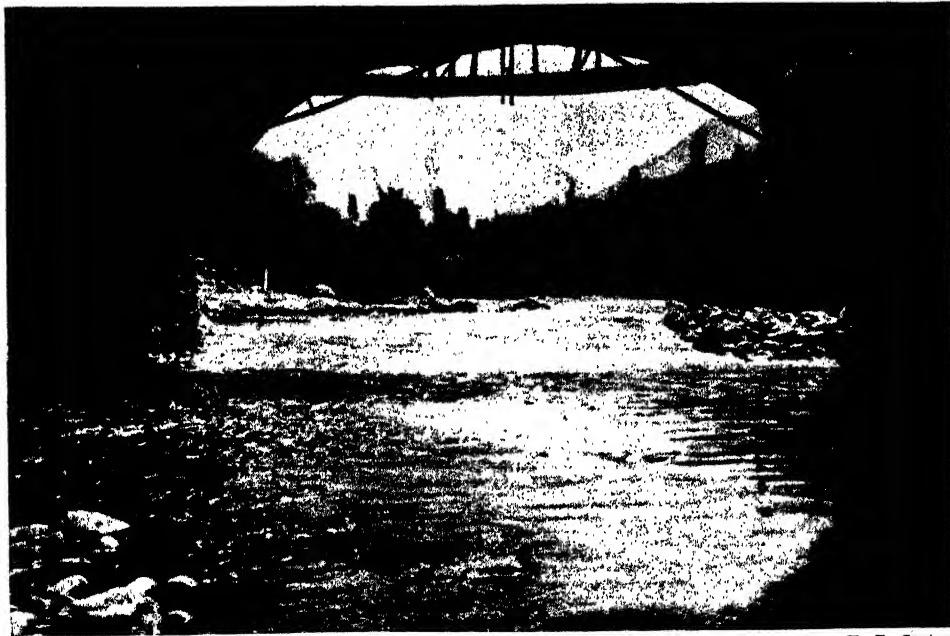
The communications of Persia are still primitive and, before the Great War, there were few metalled roads. The most important ran from the port of Enzeli (actually from Gazian on the opposite side of the spit) to Kazvin and Hamadan. Between Kazvin and the capital, a distance of 90 miles, the country is level and carriages could travel along the unmetalled track. From Teheran southwards a second metalled road ran to Kum, rather less than 100 miles, from which centre there is an unmetalled track to Sultanabad; and a third route was opened from Bushire to Shiraz and Ispahan.

The Only Engineers in Persia

During the Great War the British constructed a metalled road from railhead on the Persian frontier of Mesopotamia to Kermanshah and Hamadan. Yet another route was opened up by the British from railhead in Baluchistan to Meshed, where a route was struck which ran to the Russian frontier and Askhabad.

Elsewhere, there are only caravan routes, which have been made by the hoofs of millions of mules and donkeys who, according to one view, are the only engineers of Persia. There are practically no railways, the only exceptions being a short line which ran from the Russian frontier to Tabriz and one between Teheran and Shah Abdul Azim.

Persia is fortunate in her telegraph service. Owing to her favoured position astride the route between England and India, the magnificent Indo-European telegraph line runs across Germany and Russia to Tabriz, Kazvin, Teheran, Kum and Kashan. Not far from the last-named town, one line runs through Yezd and Kerman to the deserts of Baluchistan, entering India near Karachi, while the other passes through Ispahan and Shiraz to Bushire, where



H. F. CANTY

WOODED BANKS OF THE JARJI RUD BY THE LATEOON BRIDGE

Rising at the foot of Mount Demavend the Jarji Rud or river flows south-east for 50 miles, and is used for irrigation, as unlike the other mountain streams it never dries up. The Latéoon bridge spans the stream about 25 miles from its source, and lies on the Teheran—Meshed-i-Sar caravan route. It is locally believed that the bridge is old, but no one knows how old



H. F. CANTY

BARE SLOPES OF THE ELBURZ MOUNTAINS NORTH OF TEHERAN

Skirting the southern shore of the Caspian Sea are the Elburz mountains, which extend through the north-western part of Persia. The length of the range is about 600 miles and in places the width is nearly 200. The highest peak is Mount Demavend, 18,000 feet, which lies 45 miles to the north-east of Teheran. It is a dormant volcano and from it are obtained quantities of sulphur

communication is continued by cable down the Persian Gulf and across the Arabian Sea to the same port, near the mouths of the Indus.

It is no exaggeration to say that it is these lines that have kept Persia from breaking up, more than any action of the government. The British staff have also rendered valuable services to the Persian government by supplying accurate information when called upon to do so, while their offices have formed

the consulate or the bank as to their honesty. They suffered for it.

Rural conditions in Persia compare favourably with those prevailing elsewhere in the East. The villagers inhabit houses constructed of sun-dried bricks and usually have three or four rooms, while walled orchards are a pleasing feature and also a profitable one for, in addition to fruit and lucerne clover, the banks of the irrigation channels are planted with poplars.



Sir Percy Sykes

WINDING VALLEY IN THE HEART OF THE ELBURZ MOUNTAINS

In the foreground are a few scattered juniper trees which once covered the slopes of the mountains, but now they are fast disappearing as no afforestation is attempted in these unfrequented valleys. This photograph was taken in the neighbourhood of Shahrudd, where Alexander the Great overtook Darius. On the right a road climbs a shoulder of the mountains but is quite unsuitable for traffic

refuges for the oppressed, who could appeal to Teheran and centres of civilization throughout the country.

In addition to the cable station at Bushire, there is a fine wireless installation, which proved to be of immense value during the Great War. It is also interesting to note that Persia lies on the route that is followed by airmen between Mesopotamia and India.

It is desirable to state that it would be unwise for a firm to open up trade with Persia until the consuls and the Imperial Bank of Persia had been consulted. This British bank has amassed a knowledge of Persian trade conditions and of Persian mentality that would be priceless to the newcomer. I lay stress on this fact, for when serving as consul-general in Persia, I was amazed at the action of British firms of standing who advanced money to firms in Persia without inquiring from

which command a ready sale for the construction of the flat roofs of the country. Persians have the great advantage over Indians that there is no caste and that they can do tasks, such as skinning their cattle, which in India can only be done by inferior, parasite classes.

The cities and towns, as in medieval Europe, are insanitary and the population has to be continually replaced from the country at a very rapid rate. The shops are situated in bazaars, the various trades working together, with the result that the din in the coppersmiths' quarter is deafening, while the smell in the tanners' quarter is equally trying. The bazaars are covered and have a pervading smell of fat used for cooking and the smoke of wood fires, which is never forgotten. This is as much the case in Morocco as in India or Persia. The bazaars are crowded with buyers,

who take a very long time in making their small purchases, and the serious business is transacted in the caravanserais, where the merchants have their offices, and where strings of camels bring the bales of calico and other goods. Merchants, as a rule, sleep away from their offices and own land and other real estate, their credit depending mainly on these clear proofs of their wealth.

Teheran, the capital, consists of two distinct quarters, both of which are situated within its walls. The older part is occupied by fine covered bazaars and caravanserais, while the mosques and gateways are adorned with beautiful tiles. In the centre of the city is the palace, which covers an area of perhaps 100 acres, each building being set in a shady garden, while large quarters are given up to the harem, in which connexion the Shahs usually numbered their wives and concubines by dozens. Polygamy is however now unfashionable, partly owing to expense, partly owing to civilized opinion and partly owing to the ease with which "sighehs" or temporary wives can be kept and dismissed.

The old capital was Ispahan, in the centre of the country. There the tiled mosques and palaces built in the

sixteenth and seventeenth centuries are still standing to delight the traveller. One of its features was a fine avenue, shaded by splendid planes, which led from a superb bridge over the Zenda Rud past the walled gardens of the grandees to the Royal Square. This was the heart of the capital and the scene of many a review or other ceremony. It was also the polo ground of the court, and lovers of the game can still see the stone goal-posts standing and recollect that we owe the best and fastest of games to Persia.

Persians are especially influenced by their desert environment and owe their fine physique to the active life that the large majority lead in a healthy climate. The townspeople, generally speaking, live amid insanitary surroundings and, but for their love of gardens, would die out rapidly. The Persian is naturally gifted and impresses everyone who knows him with his love of poetry and literature.

After all, the Persians were the first Aryans to be civilized and to found the great empire to which we owe, both directly and indirectly, much of our civilization. It is therefore to be hoped that Persia will one day set her house in order along modern lines and revive the glory of her ancient empire.

PERSIA : GEOGRAPHICAL SUMMARY

Natural Divisions. Interior plateau, with the Elburz Mountains on the northern rim. (Cf. Tibet with the Himalayas.) Elburz Mountains, with a north slope facing the Caspian depression, form part of the great east-west mountain system : Atlas—Alps—Caucasus—Elburz—Himalayas. Southern edge of plateau abuts on the Persian Gulf. One basin of internal drainage—the Iran basin ; and Daria-i-Namak with the Dasht-i-Lut to the east (cf. Lake Chad in the Sahara) ; parts also of the Caspian and Helmand basins of internal drainage. (Cf. the Great Salt Lake.)

Climate. Interior arid with winter rains. (Cf. Algeria.) Heavy rains on Caspian shorelands. Elevation makes for a temperate climate, with the great range of daily temperature due to absence of cloud and of annual temperature due to distance from the sea. (Cf. Gobi.)

Vegetation. Forest where rain suffices. Swamp on the marginal lowlands. Scrub

on the interior plateau, with spring vegetation. (Cf. the Russian steppe.)

Products. Petroleum, carpets, gums, cereals from irrigated lands for local consumption.

Communications. Railways reach the frontiers. Steamers reach Caspian and Persian Gulf ports. Metalled roads from the capital. Usually well-trodden caravan tracks. Telegraphic and wireless communication with the rest of the world is good.

Outlook. Essentially a nomad, like the Arab, and like him predatory, because of the caravan routes which have been in use since ancient days, the Persian has little interest in land or in trade on the large scale. His ancient system of underground channel irrigation suffices, but dry farming, as in Arizona, might lead to progress. The rest of the world encroaches on his ancient domain, but the Persian has slight interest in the rest of the world and its message. His response to the outer world is bound to be small for many years.



Ernest Peterffy

GIANT ROCKS OF FANTASTIC FORM IN THE ANDES OF PERU

Peru, the cradle of South America, is a land of many wonders. The stupendous system of the Cordillera, part of the Andean system, has a peculiar grandeur of its own. At an elevation of 14,000 feet, wonderful rock formations are found extending over an area of many miles, and marine shells scattered about the ground prove it to have once been the basin of an immense inland sea.

PERU

Mountain Mother of the Amazon

by G. M. Dyott

Author of "Silent Highways of the Jungle"

IN no sense of the word can Peru be considered among the states of South America a distinct and self-contained geographical unit to itself. It has but one natural boundary of any consequence, and that is the great Pacific Ocean which thunders incessantly along its 1,400 miles of coastline from the estuary of Santa Rosa, which marks its northerly limit with Ecuador, to the quebrada of Camarones, which divides it from its neighbour Chile in the south.

This strip of coast lies on the western shore of the South American continent between latitudes 3° and 18° south of the Equator, and forms a base line on which the country as a whole, alike physically, politically and climatically, has to be considered. From it Peruvian territory stretches eastward over the great ranges of the Andes down their eastern slopes into the immense forests of the Amazon basin where short sections of rivers and imperceptible water-partings, to say nothing of imaginary lines drawn from point to point, constitute boundaries of an indistinct nature with the adjacent republics of Brazil and Bolivia.

Vast Areas of Disputed Land

A small gap in the south is bounded by Chile, whereas to the northward Ecuador and Colombia are the two neighbouring states. With these two countries the Peruvian government are trying to settle the ownership of something over 100,000 square miles of territory, so that it is not surprising to find wide differences of opinion expressed as to the total area covered by any one of them. Rough estimates place the area of Peru somewhere between 500,000 to 700,000 square miles.

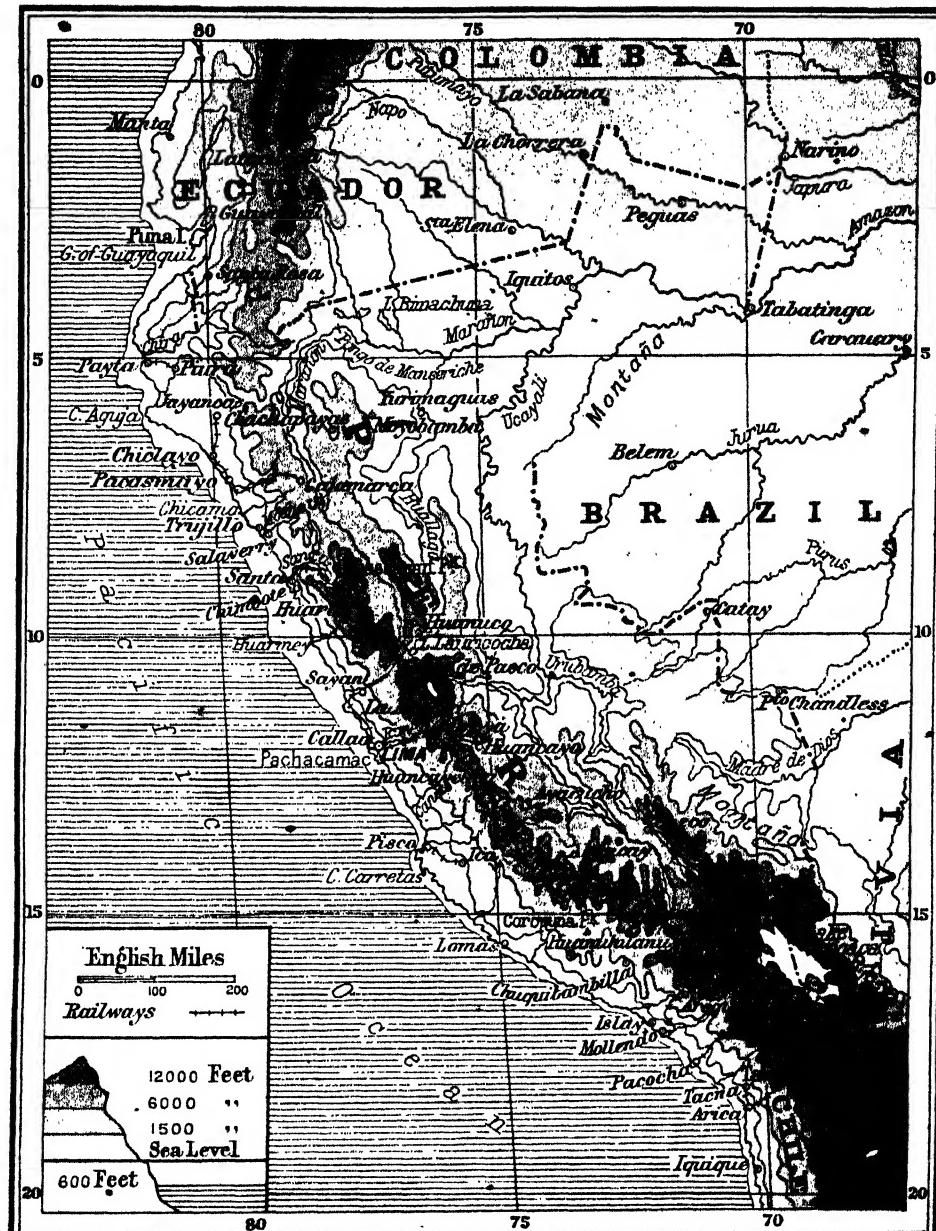
The country can be divided into three separate zones or sections, each of which has distinctive features peculiar to itself: first of all, the coast zone; secondly, the Sierra or mountainous part; and thirdly, the Montaña or region of woods.

One Shower in Sixteen Years

The first of these, as the name implies, is that strip of land lying adjacent to the Pacific Ocean. It varies from 20 to 100 miles in width and its appearance is one of unusual desolation and abandonment. Sandy wastes, out of which rise rocky eminences swathed in mist, only accentuate the forlorn aspect of the scene which greets the eye at every turn. There is no abundance of vegetation either; in fact, everything which is characteristic of the tropics is apparently absent for the reason that in this desert zone rain never falls.

Possibly I should qualify this last remark, for on one occasion when I was standing on the deck of a steamer lying off the port of Salaverry, a fellow passenger turned to me and said: "This coast is the most dismal and forlorn spectacle I ever beheld in all my life." "What can you expect," I answered, "of a country where it never rains?" Now a Peruvian gentleman standing alongside understood English and turning round said, most politely, but with a touch of indignation in his voice: "I beg your pardon, señor, but it does rain here sometimes; not long ago we had a very heavy shower." I asked him when that took place. "Let me see," he replied. "It must have been about sixteen years ago!"

Behind the coast zone and lying parallel to it is the mountainous



RAINLESS COASTS AND RAIN-SODDEN HINTERLAND OF PERU

region generally spoken of as the Sierra—it is a world unto itself, thrust up into the clouds by the forces of nature to an average elevation of well over 10,000 feet above the sea. Towering above this again come the topmost ridges of the Andes, 15,000 to 18,000 feet high, with isolated peaks such as Huascarán, Yarupacjá, Coropuna and others whose majestic summits exceed 20,000 feet.

The ascent of the Sierra is through deep water-worn gorges and narrow defiles flanked on either hand with almost vertical masses of rock. At 10,000 feet the scenery takes on a more open aspect, the gradient becomes considerably less precipitous and we enter on the high plateau country, a great waste of rock-strewn slopes known as punas. The basin of lake Titicaca in the south is

typical puna country. Valleys in the neighbourhood of 7,000 to 10,000 feet above sea-level enjoy a more agreeable temperature, and it is in such as these that the greater bulk of the mountain inhabitants lives.

Although the surface of the Sierra in many places is broken and twisted into fantastic shapes bearing eloquent testimony to the upheavals which took place thousands of years ago, there is not much volcanic activity to be met with. Such as there is seems to be confined to the western chain of the Cordillera below latitude 13° South. The most prominent cone is El Misti, near Arequipa in the department of the same name, and not far from it is the smaller volcano of Ubinas.

To the east of the Andes we find the largest of the three sections to which reference has been made: this is known

as the Montaña, and it occupies something like three-fifths of the total area of the republic. It is a country of heavy rainfall and is covered with a mantle of dense tropical vegetation through which uncounted rivers thread their way. The term is generally applied to all the forest region, not only the low-lying ground of the Amazon basin but the whole district right up the eastern slopes of the Andes to about 11,000 feet, at which altitude vegetation first makes its appearance.

Peru's waterways, like many of its other features, form a peculiarly interesting study in themselves, but it is one of the ironies of fate that on the coast, where water for irrigating purposes is badly needed, rivers are few. The Montaña, on the other hand, with its scanty population, suffers from a superabundance of moisture of all kinds.



B. N. A.

APPROACHING THE HIGHEST MOUNTAIN PASS IN THE WORLD

The Central standard-gauge railroad of Peru, termed "the most audacious piece of railway engineering in the world," starts at Callao and traverses the littoral to Lima. Thence it ascends the western slope of the Andes to a height of 13,865 feet, attaining this great elevation by a series of sixteen switchbacks, and has its terminus at Huancayo, 217 miles distant, on the eastern side of the Andes.

The Pacific slope of the Andes is drained by streams of small size and short trajectory, and such water as they bring down from the higher altitudes is all diverted by man over the parched up plains for irrigation purposes long before it ever gets to the sea, except in the case of the Chira and Santa rivers; but it is only a matter of time before modern engineering will prevent the precious liquid from thus running to waste.

Where the Amazon is Born

There is also a series of mountain streams which drain into lake Titicaca in southern Peru on the Bolivian border. This huge expanse of fresh water is over 50 miles across, 160 miles long and in places 875 feet deep. It is at an elevation of 12,500 feet above sea-level and has no outlet either to the Pacific or the Atlantic, but in conjunction with a series of other lakes in Bolivian territory forms a distinct hydrographic system to itself.

What is usually accepted as the parent stream of the Amazon, or Marañon as it is called in its passage through Peru, has its origin in a chain of lakes north of the Cerro de Pasco. From the last and largest of the group, known as Lauricocha, this mammoth of waterways emerges as a crystal stream of good size. Flowing in a general northerly direction it soon becomes a seething mass of chocolate-coloured liquid which goes swirling and crashing through a narrow and tortuous gorge between two massive ranges of the Cordillera which tower up on either side with their summits lost in the clouds.

Upper Gorges of the Marañon

Through these it breaks in a series of cataracts and gorges, the last one being the celebrated Pongo de Manseriche. A few miles below this point the current becomes sluggish and the water navigable, continuing so for the remaining 2,400 miles of its course to Pará on the Atlantic seaboard. The upper reaches of the Marañon can be taken as typical of almost every river in the Sierra.

It may be noted in passing that the Ucayali is considered by some authorities to be the parent stream of the Amazon, insomuch as its source in southern Peru, north of the Vilcañota Knot, is more remote from the Atlantic than that of any other affluent.

Many of the rivers of the Montaña are unnamed and unexplored. This region is covered with them, a perfect network running in all directions but with a common object—to join the Amazon. These are the arteries of travel used by the forest Indians, or else an occasional rubber-gatherer who ventures into the leafy solitude of the woods in search of "black gold."

It is to be expected that over country of such widely dissimilar nature as has been described in the previous paragraphs, an infinite variety of climate should be found, from arctic cold to tropical heat, yet one seldom asks a Peruvian what sort of weather conditions prevail in his particular part of the country, but rather in which zone he lives and at what elevation; that gives the key to the situation and tells everything one wants to know about it.

Factors in Climatic Variation

While altitude causes climatic variations within any zone, two other factors must be considered which affect the zones as a whole and are responsible for some of their peculiarities. First and foremost comes the Humboldt current, that ocean stream of ice-cold water which sweeps up from the South Polar regions and is the direct cause of the relatively low temperature encountered on the coast.

Secondly, the prevailing wind which blows with persistent regularity across Brazil is responsible for other characteristics. This wind travels at a great height of over 14,000 feet, and is laden with moisture drawn from the streaming forests of the Equator. On striking the first ridge of the Andes the major portion of this is precipitated in the form of rain or snow. Each succeeding ridge of mountains causes a further drain on the



Underwood

SEVENTEENTH CENTURY SANCTUARY IN HISTORIC CUZCO

Many noteworthy churches and convents dating back to the far-off days of the Spanish Conquest are scattered about Cuzco, the old Peruvian town which witnessed the rise and fall of the ancient Inca Empire. The cathedral, a fine example of Spanish-Colonial ecclesiastical architecture of the early seventeenth century, contains among its treasures a high altar cased in silver and an original Van Dyck



E.N.A.

OVERLOOKING OROYA, A COMMUNITY IN THE HEART OF THE ANDES

Oroya, 12,178 feet above sea-level, is a junction on the Central Railway and has enormous copper-mines. This important railway, remarkable for its scenic interest, is the highest in the world and crosses the perpetual snow-line. It has 65 tunnels and 67 bridges, and its ramifications are being slowly pushed into the neighbouring Andean valleys, where is centred much of Peru's mineral and pastoral wealth



G. M. Drott

PRIMITIVE BRICKYARD OF PERU, SHOWING OXEN MIXING THE CLAY FOR THE ADOBE MUD BRICKS

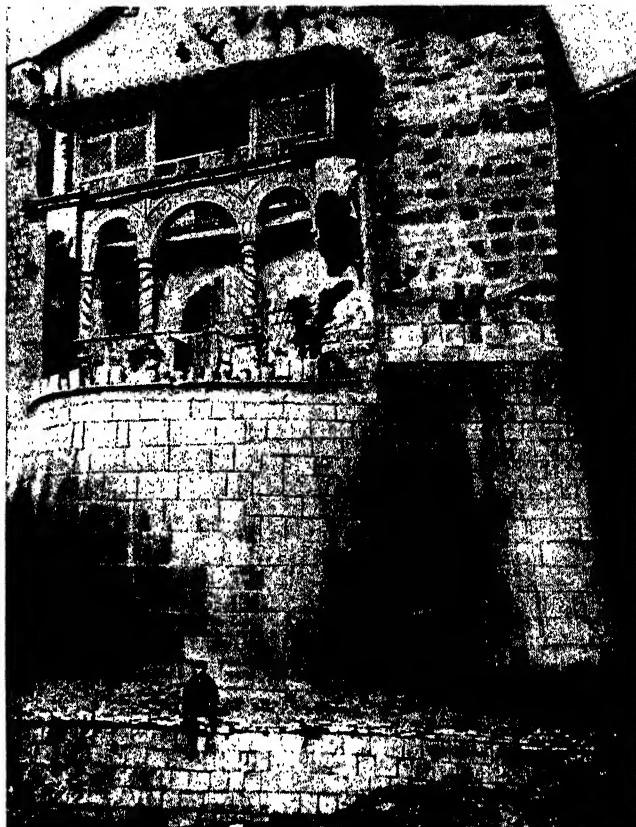
In the mountain villages houses are invariably made of adobe or sun-dried mud bricks, which are fashioned in a very primitive manner, as the photograph illustrates. Here the preliminary process is seen of mixing the clay with water and straw, oxen being driven round and round in the mixture until the right consistency is arrived at. Cattle, horses and mules are bred in large numbers on the grazing lands scattered about the highlands. The cattle industry is of some importance, and there are ranches containing many thousands of head; the native horses and mules are both hardy and docile, and capable of performing an immense amount of work.

moisture content, till on reaching the maritime Cordillera there is not much left, hence the absence of snow on this last ridge and the reason for calling it the "Cordillera Negra."

Yet another prevailing wind is encountered on the coast. It is a shallow one and follows more or less the path of the Humboldt current, and has the same characteristic so far as temperature is concerned. When it is summer in the Sierra and the lower strata of the easterly wind have been warmed in their passage over the sun-baked foot-hills, sudden contact with the cold Humboldt current and the chilly breeze which accompanies it precipitates the few remaining particles of moisture in the form of mist.

Thus we have a peculiar state of affairs; when it is winter on the coast and the sun is obliterated by fog, sunshine prevails in the Sierra, but when storms rage on the mountains from November to April then the farmer on the coast reaps his sugar-cane and collects his cotton in comfort. The elevation at which the reversal of seasons takes place is 3,000 feet, so that a town like Chosica on the Central Railway is roasting in the sunshine of summer when Lima, the capital, which is only an hour's distance away by train, is enveloped in the mists of winter.

So far as actual temperature goes there is not much variation between summer and winter, the mean average of the former being 78° F. and the latter 66° F. This absence of any pronounced thermal change so desirable for healthy existence reacts visibly on the inhabitants of the coast, making them indolent



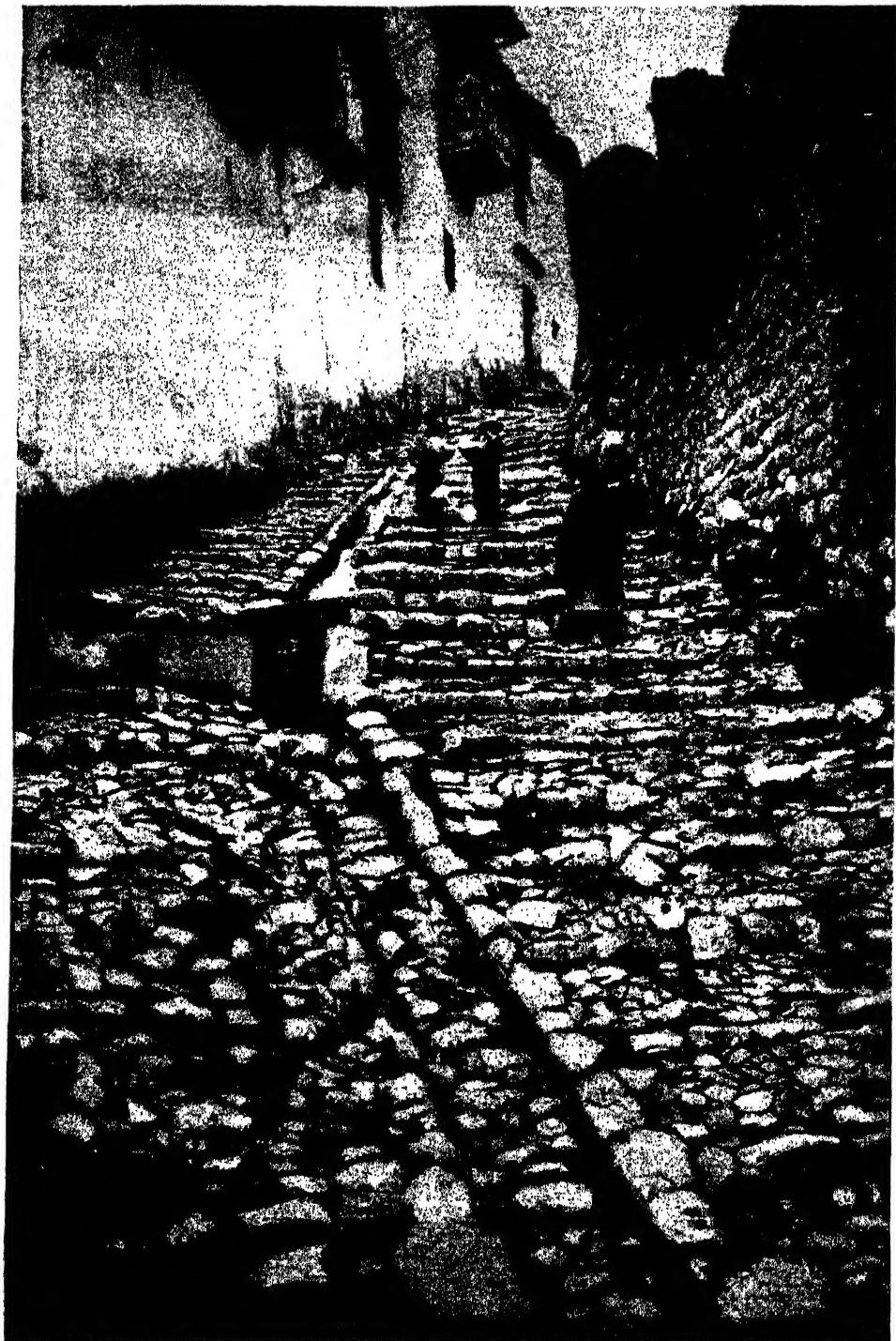
LASTING STONEWORK OF INCA ARCHITECTURE

The numerous ruins and relics of Cuzco hold immense interest for the archaeologist. Scarcely a street but displays some fragment of Inca handiwork, and the ancient walls, of perfect stonework with rounded corners, serve as foundations for modern structures

and lethargic. Even foreigners are affected by it, and seem to lose their driving force after a long period of residence in this zone.

By contrast the Serranos or dwellers in the mountains are a more virile people; they have to stand extremes of both heat and cold, and their swarthy complexions give them a look of superb health which any European might well envy. Much of the labour employed on the coast for harvesting the large sugar crops comes from the mountains.

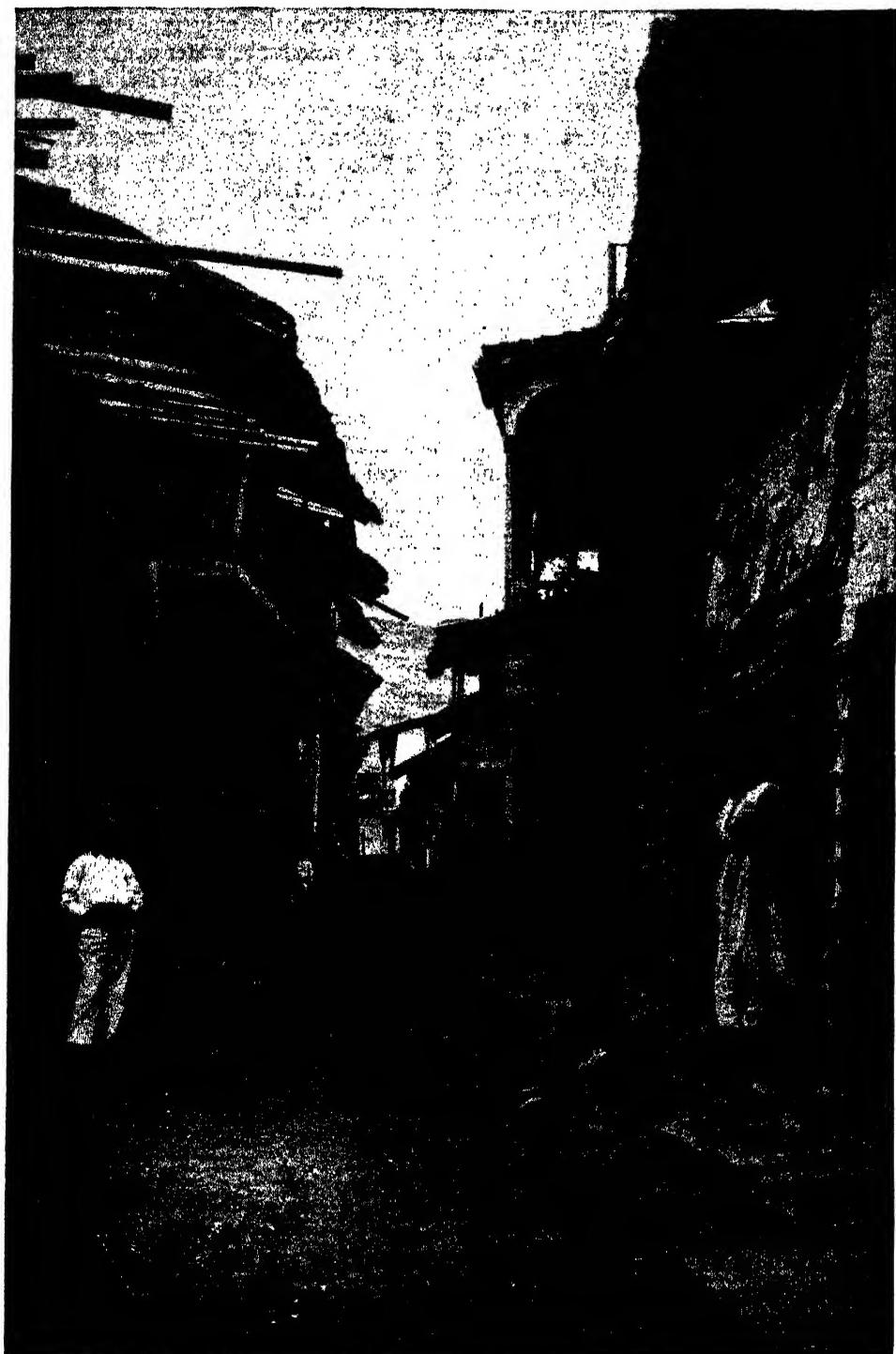
The chief food products of the Sierra are maize, barley, wheat, potatoes, quinua, etc., and it is upon such simple fare that the inhabitants largely subsist. In many of the deep gorges of the mountains tropical produce is grown such as coffee, chocolate bean, pineapples, bananas and so on, but the



L. E. Elliott

STAIRWAY STREET IN THE ANCIENT CAPITAL OF THE INCA EMPIRE

Cusco stands in a secluded Andean valley surrounded by terraced slopes and mountain peaks. It has clung persistently to its ancient customs and in many of its narrow, cobble-stone streets are evidences of a civilization that flourished long before the New World was discovered by Columbus. Vehicles are unknown in the steep stairway streets and loads are carried by barefooted Indians.



TIME-WORN STREET OF PAYTA, TOWN AND PORT OF NORTHERN PERU
The small town of Payta, with its 3,500 inhabitants, has considerable importance on account of its ability to tap the principal cotton-growing districts, and because of its thriving export trade in sugar and Panamá hats. Of old-world Spanish appearance and mainly built of wood, it is frequented by many visitors, and despite its proximity to the Equator the climate is agreeable and healthy.

production of these is limited, the chief source of supply being the Montaña.

There is a small amount of dried meat exported to the nitrate fields in Chile, but the raising of sheep is not carried out for their mutton so much as for the superfine wool which they produce. Alpacas likewise are bred for their shaggy coats, which command a particularly good price in the world's markets. In view of the fact that this is a business peculiar to Peru and the adjoining country of Bolivia alone, one is apt to wonder why it has not been developed on a larger scale.

Rearing Guinea-pigs for Food

Chinchilla, although at one time numerous, have been killed off in large numbers on account of their fur, which is extremely beautiful; but it is only a matter of time before the systematic breeding of these small rodents in captivity will be undertaken.

The vicuña has also suffered in the past from depredations of the hunter, but is now protected like the chinchilla. Of game animals there are few. The small Andean speckled bear is sometimes encountered, and there is also a small variety of deer and a ground squirrel known as the viscacha. Rabbits, rats and mice of various varieties conclude the list of fauna which is not very great at the best of times. Mention should also be made of the cui, or guinea-pig, which is bred by the Serranos for food, and very good eating it is too.

Experiments in Cross-breeding

Experiments were carried out in southern Peru at Chuquibambilla for the Peruvian government. Remarkable results were achieved not only with sheep but with all kinds of live stock. Among other things particular attention was paid to breeding alpacas, llamas and vicuñas, and to producing crosses between them whose clips have already found their way to Leeds and been woven into fabrics of fine quality.

Agriculture on a large scale is possible on the coast for the reason that there

are large areas which lend themselves to cultivation, the only limiting factor being the amount of water available for irrigation. Some of the principal river valleys under irrigation are the Chicama, Moche, Santa, Huarmey, Rimac, Canete and Pisco, while around the towns of Piura, Chiclayo, Pacasmayo and Arequipa are tremendous areas producing cotton and sugar-cane.

The Incas of old cultivated every patch of ground possible, building retaining walls on the hillsides to prevent the small amount of surplus soil from being washed away by the heavy rains. These andenes, as they were called by the early Spaniards, are still cultivated by the industrious mountain cholos, and the patchwork effect produced on the sides of the mountains is indeed curious. How the natives ever reach some of them, let alone cultivate them, always proves a matter for conjecture in the mind of the observer.

Beauties of the Andean Valleys

Nothing could be more exhilarating and enjoyable than to ride through some of these Andean valleys in the month of May or June, especially at an elevation of about 7,000 to 10,000 feet. As you head your mule up the mountain trail wild flowers will be encountered in great profusion on either side. Shrubs of heliotrope in full blossom impart a delightful fragrance to the air, and the brilliant colouring of the landscape stands out vividly in an atmosphere of crystal clearness. Birds are plentiful, and as your mule picks his way cautiously along your eyes wander in all directions absorbed in the beauties of nature which unfold before you.

Higher still you mount into the home of the condor; you will probably see a number of them with wings outspread soaring off into space almost alongside of you without a tremor or movement of any kind unless it be a slight inclination of the head looking this way or that in search of food.

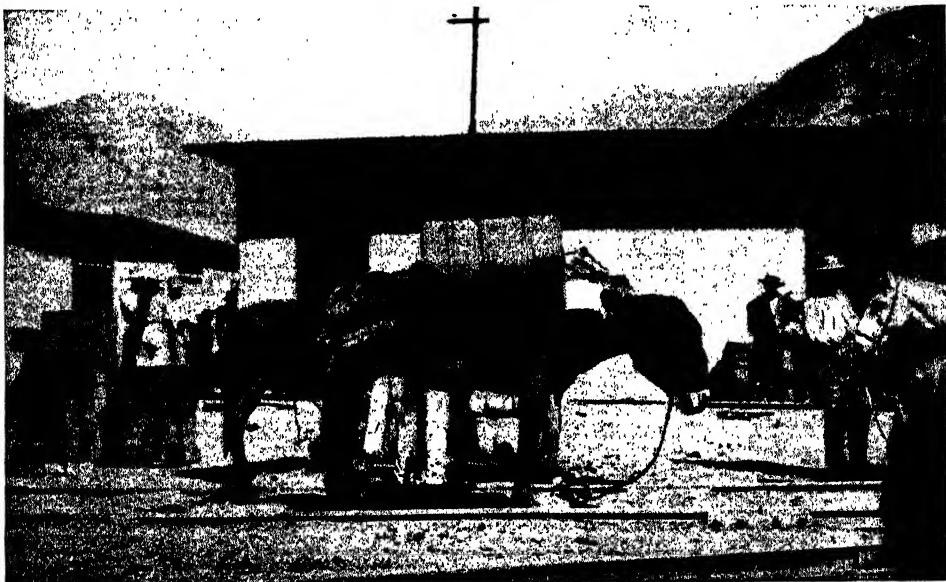
The trail now becomes like a shelf cut on the face of some great granite cliff,



Underwood

GRUESOME RELICS IN THE INCA BURIAL GROUND AT PACHACAMAC

About 20 miles south-west of Lima lies Pachacamac, one of the most interesting of the important ruins found on the Peruvian seacoast. Many relics have been unearthed, which have largely contributed to modern knowledge of the Incas, and fragments also exist of an elaborate pre-Incaic structure, presumably a temple of the Yuncas, whose culture gave South America some of its finest prehistoric works.

**LOADING PACK MULES PREPARATORY TO MOUNTAIN TRAVEL**

Mules are used everywhere in Peru as pack-animals and large numbers are especially bred for the carrying trade. The rough mule trails, rocky and generally execrable, which have served for centuries, suffice the bulk of the inhabitants who are not a road-building people. When loading a mule the carriers often blindfold the animal in order that it shall not be startled at the size of the load.

and your mule takes particular delight in walking on the outer edge of the narrow path. So with one of your legs in imminent peril of being crushed against the rocks and the other dangling off into space you look down a sheer drop of 3,000 feet, and in this position contemplate at leisure a mountain torrent which rumbles below, dashing itself into spray against the huge boulders that are piled up in disorder along its course.

Seasons Wet and "Less Wet"

In the Montaña the seasons do not exhibit any greater variation than they do on the coast. Such as there are follow those of the Sierra, only under the names of the wet and the dry, the latter being frequently referred to as the "less wet" since in most places rain is of daily occurrence. There are some sections, chiefly on the Andean slope, which enjoy a pronounced dry spell some time during the year. Moyobamba at 2,700 feet in the valley of the Rio Mayo is a typical case in point, likewise La Merced in Central Peru on the Pichis trail.

Vast Volume of River Water

That which really affects the life of a settler in the Montaña and regulates his goings and comings is the amount of water in the river on the banks of which he lives. Some impression of the immense volume of water which sweeps past Iquitos, the inland port of Peru, 2,147 miles from the Atlantic, may be gathered from the following. Inclusive of an island in the centre of the stream the river measures nearly two miles from bank to bank, the main channel is about 900 yards across and the other over a mile broad, the maximum depth amounting to 70 feet or more at the height of the rainy season. If the traveller in the river country wants to be sure of the best weather conditions it is well to avoid the months of February, March, April and May.

Fertile and rich as the Montaña certainly is, it must be admitted that

when once the first paroxysms of delight produced by the sight of these great rivers and the luxuriant vegetation has worn off the ever-present forest has a most depressing influence.

But the potential wealth of the district is undeniable. Cotton is becoming a commodity worth cultivating, the existence of oil has been proved in many districts, hardwoods are being sought after in many areas, and other products of the tropics, such as balata, gum, vegetable oils, etc., are daily receiving greater attention in the commercial world. Towns like Yurimaguas on the Huallaga are recovering from a long period of stagnation and others, more favourably located on higher ground, are again producing coffee and Panamá hats in appreciable quantities.

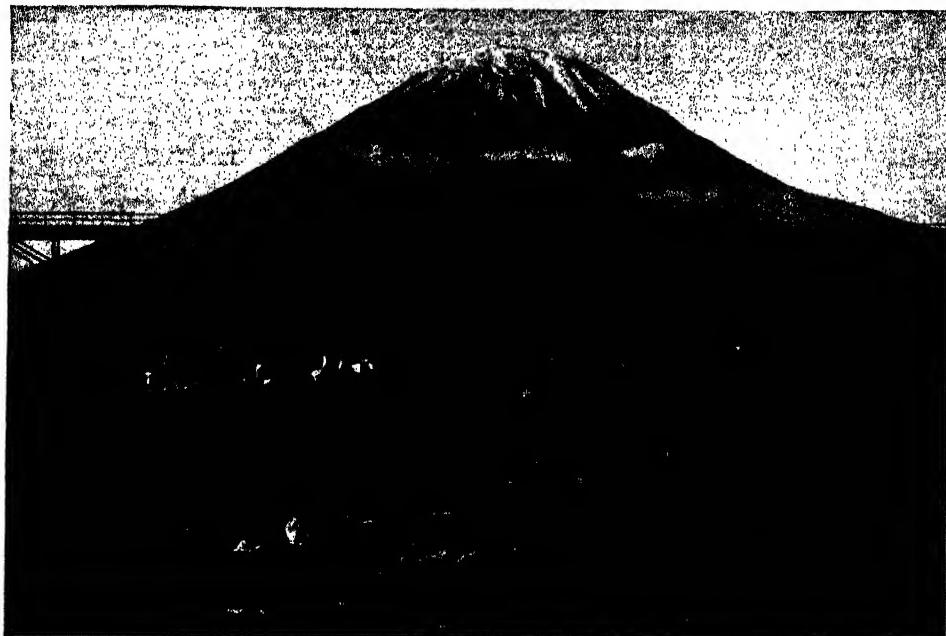
Denizens of Forest and Swamp

The fauna of the Montaña is fairly numerous but not remarkable for size. The tapir is the largest, followed by the jaguar and puma. Smaller animals such as the ant-eater, armadillo and ring-tailed racoon with peccaries, sundry rodents and monkeys are numerous both in the forests and along the banks of the rivers. Alligators and turtles are plentiful in the sluggish streams, and, of course, there are thousands of fish.

The largest, called the paiche, grows to a great size, and in its dried state constitutes an important article of food in the river country. The anaconda, or water boa, lives in the swamps and is rarely seen, the same thing applying to the many snakes which one reads about. I have travelled for miles through the forests day after day and have never seen a snake of any kind.

Macaws, egrets, trumpeter birds, toucans and jungle fowl are plentiful, also bats and hosts of insects from the large bird-eating spiders to the smallest sand flies that pass through ordinary mosquito netting like an open window.

The natural resources of Peru are enormous. Almost every mineral known to science, except platinum and tin, is found in abundance, then there are



AREQUIPA IN ITS BEAUTIFUL VALLEY AT THE BASE OF EL MISTI

The second city of Peru and capital of a department, Arequipa lies at an altitude of 7,750 feet in a lovely valley at the foot of the formidable El Misti, a great mountain, 19,200 feet high, which is one of the volcanic peaks in the western or maritime Cordillera. Near the picturesque old town are hot mineral springs, also an observatory founded by Harvard University



L. E. Elliott

WILD NATURE ON A SUGAR HACIENDA NEAR TRUJILLO

Trujillo, the capital of the province of La Libertad, lies on the Moche river, 320 miles north-west of Callao, and is connected by railway with its port Salaverry. Its commercial importance is rapidly growing; it is the base of the extensive operations of the Northern Peru Mining Company and is a centre of the flourishing sugar industry, sugar being the chief agricultural crop of Peru

certain rare metals, such as vanadium of which Peru provides 90 per cent. of the world's supply.

The eastern half of the Andes is rich in gold and most rivers coming down into the forest country carry the precious metal in alluvial form. I have panned out as much as a sovereign's worth in the space of fifteen minutes on the banks of some. Throughout the Sierra one finds gold, silver, copper, antimony, lead, cadmium, zinc, tungsten, molybdenum, coal, iron, mercury, etc., but on the Pacific slope the most abundant precious metal is silver.

There are some very large and up-to-date metallurgical plants in operation, the chief of which is the smelter of the famous Cerro de Pasco Copper Co. The ore treated by this company is very rich in gold and silver, so much so that they pay the cost of mining and smelting, leaving the value of the copper as so much clear profit.

All kinds of opportunities are awaiting the experienced mining engineer in this part of the world, and it is to be hoped that capital will soon be forthcoming to open up the large number of rich mineral deposits, the existence of which is already well known. Of course, the crying need from one end of the country to the other is that of transportation, and as soon as railways and roads have been

built a new era of prosperity will follow. Peru's position in the South American continent is particularly favourable for the reason that access may be obtained to it from all sides. Furthermore, the two chief arteries of communication which will eventually be established on the continent must intersect in Peruvian territory. The two arteries are the Pan-American Railway, which will pass from Panamá following the Andes south to the Argentine; and, secondly, a transcontinental route via the Amazon.

There are two really remarkable railways already in existence which connect the coast to the high plateau of the Andes, one of them the Central Railway from Callao, the most important of Peru's seaports, through Lima to Oroya. From Oroya there is a line running north to Cerro de Pasco and another one south through the valley of the Mantaro to the flourishing mountain town of Huancayo.

The other, known as the Southern Railway, leaves Mollendo, passes through Arequipa, climbs up to the shores of lake Titicaca, turns north and ends in the old Inca capital of Cuzco.

It is obvious to anyone who has travelled extensively in all parts of the republic that railways alone will not suffice—mules, motor-cars, aeroplanes, and river-craft must all be given trial.

PERU : GEOGRAPHICAL SUMMARY

Natural Division. Section, with indeterminate boundaries, of the Andean Cordillera, with the corresponding coastal slopes and the inner Amazon slopes. Physically, three well-marked zones. (Cf. Chile and Ecuador.)

Climate and Vegetation. By latitude the climatic zones should lie east and west, with tropical forest in the north and hot desert in the south. (Cf. the Congo basin and the Kalahari or Australia in the north-west.)

The north-west mountains and coast make the climatic zones lie north-west and south-east. The south-west is arid lowland. (Cf. the Chilean nitrate fields.) The Sierra or mountain zone is rainy and temperate, and the north-east is humid, with constant tropical rainfall and tropical jungle forest. Irrigation is essential in the coastal valleys. Winds, as a rule, blow seawards, and the inland is wetter than the coast.

Products. Minerals : silver, vanadium (90 per cent. of the world's supply), copper, gold and other rare and precious metals. (Cf. Bolivia, Chile.) Textile materials : wool from sheep, fibres from alpacas, vicuñas and llamas ; products possible of expansion under a scheme of breeding. Cotton and sugar cane. Maize, barley, potatoes. Coffee, cacao.

Communications. Oversea access is easier since the Panamá Canal came into use. Interior communications by short stretches of railway and poor roads and trails which are totally inadequate. Additional transport facilities are essential to cross the waste between the sea and the Sierra.

Outlook. Rich, potential resources await development and exploitation, and the future lies with the rest of the world, which will, some day, find an adequate return for capital invested. Shortage of supplies elsewhere will hasten the day.

PETROGRAD

A City Fallen from Its High Estate

by A. MacCallum Scott

Author of "Through Finland to St. Petersburg"

PETERSBURG, Petrograd, Lenigrad, the three titles borne successively by the former capital of the Russian Empire during the two centuries of its existence, sum up epigrammatically the history both of the city and of the empire since the time of Peter the Great.

The German name of Petersburg is a symbol of the master idea in the mind of Peter the Great when, labouring like a Titan, he wrested from Charles XII. of Sweden the marsh lands where the Neva pours its flood into the Gulf of Finland, and founded there, in that desolate and savage wild, a new capital for his empire.

He had inherited a semi-Asiatic state. The Russian people were only partially Slav. There was a very large admixture of the Finnish tribes which had formerly inhabited the country east and north of Moscow. The whole country had, moreover, for three centuries been subject to the Tartars, who had not only mingled their blood with that of the Russians, but had imposed upon them many Asiatic customs and ideas. Moscow was as little European, almost, as Constantinople.

Window from Asia into Europe

The country had no access to the sea, either on the Baltic or on the Black Sea, and it was completely isolated from the rest of Europe. The task to which Peter devoted his life was to transform Russia into a European state, and for this purpose it was necessary for him to hack a way through powerful enemies to the Baltic, in order that he might have, as he said, a window into Europe.

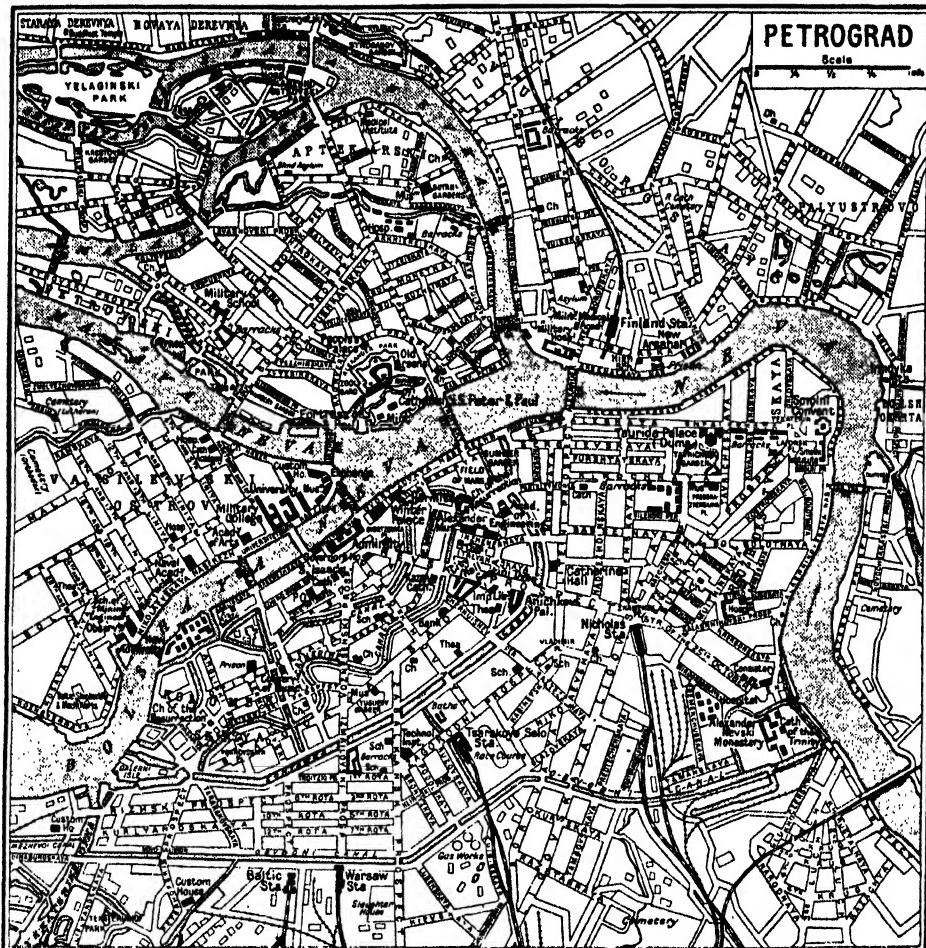
Petrograd, therefore, presents the strongest contrast to Moscow. Upon

a race of serfs and semi-civilized nobles Peter imposed a European bureaucracy, staffed largely by Germans, Austrians, Swedes, Dutchmen and British. And the capital that he founded was a western European city. In Petrograd, as he planned it, there were no buildings like the Kremlin and the church of S. Basil in Moscow. The architects were either Germans or German trained. The long, regular, monotonous frontages, with their imitation classical and Renaissance forms, were similar to those which were being reproduced at that time in all the Western capitals. The streets were laid out with a ruler and T-square, like the avenues of New York. But the plan was on a scale of imperial magnificence.

A City that Stands upon Stilts

The river was embanked with massive blocks of granite. On the south side splendidly broad streets, called Prospects, radiate from the Admiralty like the spokes of a wheel. They are crossed by three concentric rings of canals—the Moika, the Ekaterinsky and the Fontanka. The squares and parade grounds are vast expanses. Everything is eloquent of the mighty, compelling hand of the autocrat.

The mainland and the delta of islands over which Petrograd has spread are not the site on which a city would naturally have grown up. The land was a swamp. Wherever Peter built he could only find a foundation by driving piles deep into the oozing earth. The city really stands upon stilts. The port is frozen up for five months in the year. The surrounding country was a desert. The benevolent despot had not merely to conscript an army of workmen to



PETER THE GREAT'S ACHIEVEMENT AS IT IS TO-DAY

build the city, he had to drive in a population to inhabit it. The Russian people groaned and writhed under his coercion, but his creative hand was heavier upon them than the rod of Ivan the Terrible. Ivan made them slaves, and they worshipped him as a national hero. Peter civilized them—and, after some ineffectual struggles, they submitted sullenly, as to the hand of fate.

The Russian people have never loved Petrograd as they loved Moscow. The old capital was always to them "Mother Moscow," the national home, the shrine of their patriotism. Petrograd, far away in the north, was the seat of an impersonal Imperial Power, the home of *tchinovniks*, the official class who were the plague of Russian life. It

was a great cosmopolitan, alien city. It was contrary to nature.

And yet for two centuries after the death of Peter his dead hand held Russia in the path which he had decreed. As the seat of the court and the army and the government, as the educational and artistic centre of a continually expanding empire, Petrograd became ever more populous, more wealthy, more powerful and more splendid.

Under Catherine II. and succeeding tsars the capital was enriched beyond even the dreams of Peter. The Winter Palace reared its huge bulk by the bank of the Neva. At one time a population of 6,000 persons found shelter in its labyrinthine cellars, rooms, galleries and garrets. The fire-watchmen

on the roof built huts there, and brought up their wives and families and domestic animals. It is even said that cows were kept on the roof. It was a city in itself, whose census had never been taken. It was destroyed by fire, and was rebuilt more splendid than before.

Close beside it the Hermitage was crammed with wonderful collections of pictures by the old masters, statuary, antiques and other treasures, many of them looted by Napoleon from the galleries of Germany and Austria during the revolutionary wars. The magnificent Imperial Library, in the Nevski Prospect, has also been enriched by the spoils of war in Europe and Asia.

The city which continued to grow on so vast a scale retained, even after the death of Peter, the western European stamp and purpose which he had impressed upon it. The architecture of the churches was not in the orientalised Byzantine style so popular in Moscow, but was based on Western models.

The Cathedral of S. Isaac, which stands in the centre of a far-spreading square by the side of the river, is a



A. MacCallum Scott

"ALL PRIZES, NO BLANKS"

The right-hand notice declares that money invested is "without loss," so a bottle of champagne or bust of Lenin may reward credulity in this Lottery Allegri near Sadovaya Street

magnificent late Renaissance building. It is built on the plan of a Greek cross, from the centre of which rises a vast dome of gold, which can be seen shining in the sun far out in the Gulf of Finland. The four porticos are supported by 112 megalithic pillars of red Finland granite, each of which is 7 feet in diameter, 60 feet in height and 128 tons in weight. The building of this majestic temple lasted over three reigns, and the cost was more than three and a quarter millions sterling.

The Kazan Cathedral, in the Nevski Prospect, is built on the model of S. Peter's at Rome and has a crescent-shaped colonnade of 136 pillars extending on either side of the main entrance. A more Russian note is struck by the long, delicately tapering, needle-like spire of the fortress church of S. Peter and S. Paul. The fortress, which was also a famous, or infamous, political prison, occupies the whole of a little island on the side of the Neva opposite the Winter Palace.

But other forces were also at work beneath the surface in Russia. There



A. MacCallum Scott

THE NEW ART IN THE NEVSKI

A statue of Ferdinand Lassalle, the German Socialist, looks down on ill-kept pavements and shabby houses—remnants of what was once Petrograd's most luxurious street.



B.N.A.

GENERAL VIEW OF PETROGRAD, THE CAPITAL OF THE FORMER RUSSIAN EMPIRE, SHOWING THE NICHOLAS BRIDGE

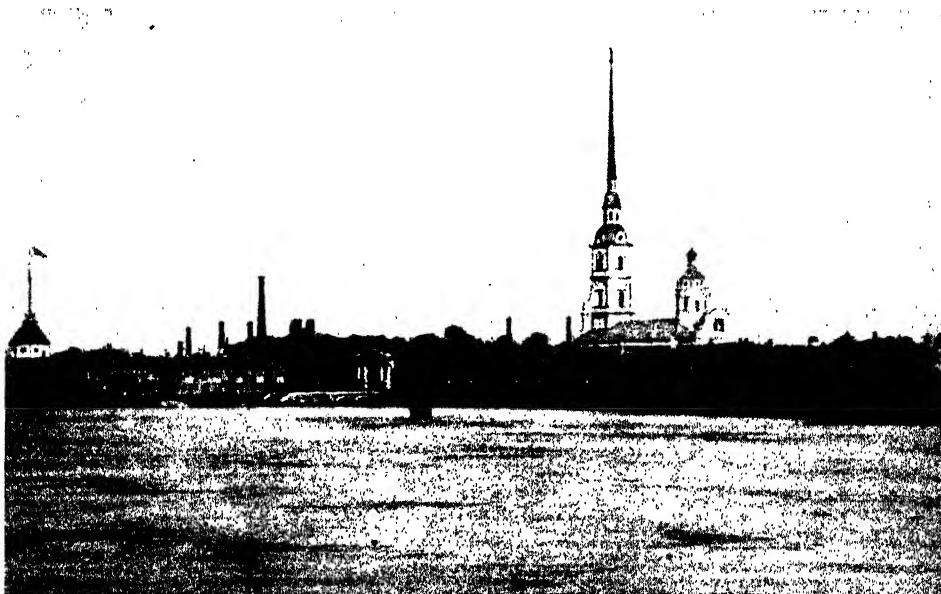
Petrograd, known until 1915 as Petersburg and re-christened Leningrad in 1922 by the Soviet government in honour of Lenin, Russia's Bolshevik leader, lies partly on the mainland and partly on small islands formed by the branching mouths of the Neva. It is the largest city in Russia, and under the Tsarist regime was the fifth in population in Europe. This view is from the Admiralty, on the left bank of the Neva, and looks across the river to Vasilievski Ostrov, with which it is connected by the Nicholas Bridge. The massive building seen on the right of the island is the former Imperial Academy of Arts

was always a strong passive resistance to the westernising process. It gathered strength in the latter half of the nineteenth century when it took the form of Panslavism, a literary and artistic revival of what were thought to be purely Russian ideals.

Politically it took the form of an attempt by means of education to Russianise all the diverse races comprised within the empire. The most conspicuous evidence of this movement

Russian equivalent, Petrograd. Few people appreciated the significance of the change at the time. Panslavism had been slowly undermining the foundations established by Peter the Great.

Then came the catastrophic revolution, a few months of floundering and indecision, and finally the seizure of power by the Bolsheviks. Many things combined to precipitate this crisis—war-weariness, disorganization, financial exhaustion, the collapse of the machinery



THE ISLAND ON WHICH ROSE THE FAMOUS CITY OF PETER THE GREAT

The fortress of S. Peter and S. Paul, which during the first years of the Soviet rule was the scene of indescribable horror and suffering, occupies an islet lying north-east of the main part of Petrograd, and was the foundation stone of the city laid by Peter the Great in 1703. It contains the prison, the mint, the old arsenal and the cathedral—the mausoleum of most of the Russian emperors

in Petrograd is the Church of the Resurrection, with its forest of fantastically shaped and coloured domes and cupolas, which was erected as a memorial of the Tsar Alexander II. on the spot where he was assassinated in 1881.

At the beginning of the Great War Petrograd was at the height of its power and prosperity. The influx of munition workers and the multiplication of officials increased its population to 2,500,000. In the violent reaction against all things German, and in a wave of Panslavic feeling, the name of the city was changed from the German form of Petersburg to the purely

of government and, most of all, the unloosening of racial instincts which had been held for two centuries under the iron discipline of Peter the Great.

Within a few months the life-work of Peter was undone. The machinery of the imperial government was scrapped. Russia had slipped back several centuries and had become once more an Asiatic state. The capital was transferred back again to Moscow. And finally, as a symbol of the completeness of the Bolshevik revolution, Petrograd was rechristened Leningrad.

Petrograd takes badly to the change. It has been dethroned and scorned and

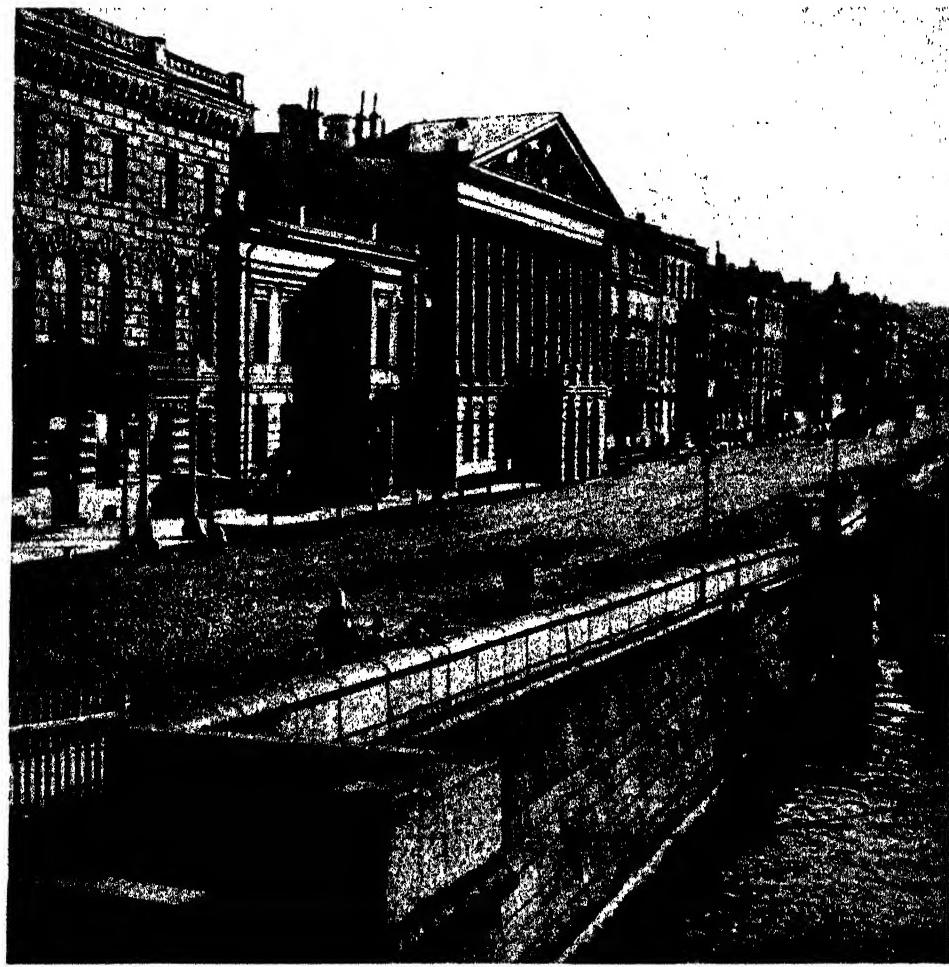
dragged into another system with which it has little sympathy. The resistance to the revolution was strongest in the old capital. It was here that street fighting took place, and the various sections barricaded themselves in palaces as in fortresses. The houses bear the marks of the fighting, and of the period of privation which followed, when, during the long winter, whole blocks of houses were gutted for firewood to preserve the remnant of the population from being frozen to death.

Seven years after the beginning of the revolution the people of this once proud metropolitan city are shabbily dressed,

dull and listless in manner, and have a haunted expression in their eyes. Petrograd is like a northern queen captive in the camp of an Asiatic conqueror.

To anyone who knew Petrograd in the days before the Great War the first sight of the city in its present state is enough to make him weep.

The Nevski Prospect was one of the great sights of Europe. The pavements were thronged with a brilliant and cosmopolitan crowd, resplendent in the most costly products of the Parisian dressmaker and in the uniforms of every country in Europe and Asia. Spurs jingled and sabres clattered on the



SCENE ALONG THE ENGLISH QUAY, OVERLOOKING THE BOLSHAYA NEVA
The main part of Petrograd lies on the left bank of the Neva which, about 40 miles in length, flows from Lake Ladoga past the city, and, dividing into several branches, empties itself into the Bay of Neva in the Gulf of Finland. The Angliyskaya Naberezhnaya, or English Quay, runs along the left side of the river from Peter Square to the New Admiralty

Bwing Galloway



LOOKING ACROSS THE DVORTZOVAYA SQUARE TO THE WINTER PALACE

Through the fine archway in the façade of the former Office of the General Staff, the Alexander Column is seen rising in the Dvortzovaya Square to its great height of 153 feet. Directly opposite it, on the north side of the square, lies the Winter Palace, erstwhile winter residence of the imperial family, a handsome building which measures 499 feet long, 384 feet wide and 92 feet high.

pavement. On either side luxurious shops displayed costly and tempting goods. Sumptuous motor-cars and carriages drawn by high mettled horses rolled swiftly over the wood-paved street. Restaurants were open till morning and the soft radiance of the northern night looked down upon the returning revellers.

Gone is all that fashionable crowd ; gone are the glitter and the gaiety ; gone are all the butterfly people. There are holes in the pavement in which the unwary pedestrian might break his leg. There are ruts in the street like a country road. In places the wood blocks have been torn up for firewood. In other places they have rotted away, and, as it lurches over the cavity, the shabby droshky almost precipitates its passenger out on the street.

The stucco Corinthian columns are crumbling and the paint is peeling off. All the familiar shop signs have

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disappeared. Many of the plate-glass windows have been cracked and have been roughly boarded up. Many of the shops are closed.

In place of the gay restaurants there are only a few miserable cafés. At the corners squat pedlars of cigarettes, sunflower seeds, apples and cakes. And, to complete the transformation, the name of the Nevski Prospect has been blacked out, and instead of it has been written up "Street of October 25." A bust of Lassalle, the German socialist, a striking example of Bolshevik art, looks down upon it from a square-hewn pillar.

In certain quarters of the city one comes upon whole blocks of buildings in ruins, or with the windows blank and staring. In the side streets grass may often be seen growing. Many of the great granite blocks which guard the embankment have been dislodged,



E. N. A.

WHERE RUSSIA HOUSES HER PRICELESS ART COLLECTIONS

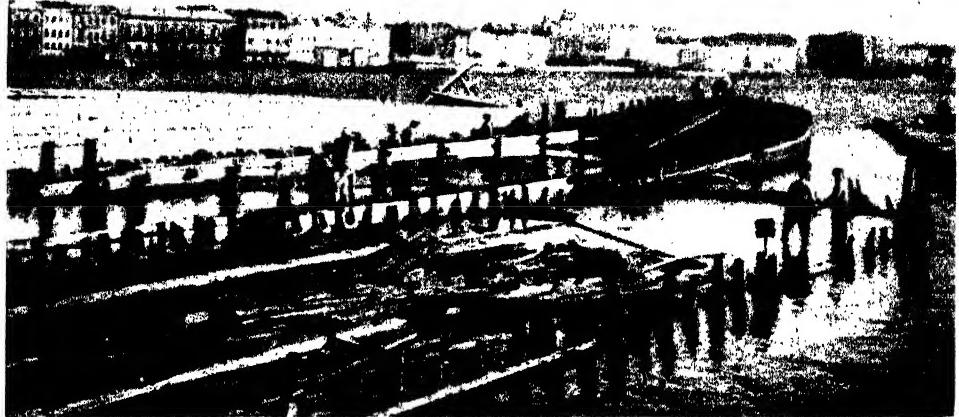
The Hermitage of Petrograd has for many years been a household word to devotees of art, and still contains one of the finest collections of paintings in Europe. Founded in 1765 by Catherine II., it was reconstructed and enlarged under Tsar Nicholas I., and completed in 1852. Above is the façade facing the Millionnaya, under the pillared portico of which stand ten granite Atlantes nearly 20 feet high.



S. J. Beckett

S. ISAAC'S CATHEDRAL, PETROGRAD'S LARGEST SANCTUARY

S. Isaac's Cathedral, an imposing structure erected in 1819-58 in the shape of a Greek cross, stands in the Isaac Square to the south-west of the Alexander Garden. Each side of the massive granite and marble building is adorned with a beautiful portico, approached by a granite stairway and surmounted by a pediment with bronze relief, the whole being crowned by an immense dome of gold.



BREAKING UP OLD BARGES FOR FUEL ON THE NEVA

Petrograd experiences a long and often very severe winter, and the question of fuel became almost as vital as the question of bread in the distressing days which followed the Bolshevik coup d'état in November, 1917, and the establishment of the Soviet government. Superfluous furniture was quickly disposed of, even houses were broken up for firewood; in a word, wood was worth its weight in gold.



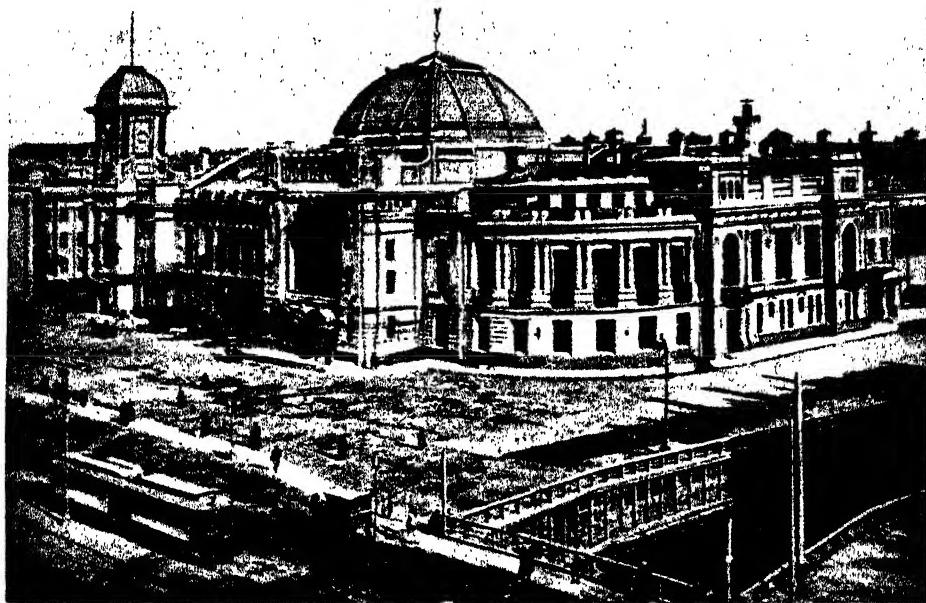
ERSTWHILE NEVSKI PROSPECT, NOW "STREET OF OCTOBER 25"

The Petrograd of post-War days presents a very different appearance from the pre-War city. The Nevski Prospect, which runs from the Admiralty to the Alexander Nevski Monastery, eloquently testifies to what depths the one-time Russian capital has fallen. Dirty and unsavoury, with holes in pavement and road, all its beauty has gone; and gone, too, have all its fashionable crowds.

apparently by the clumsy handling of vessels. The railings round the Winter Palace have been demolished. At first sight one is tempted to say that this is a dead city, and that the people are but dwellers among the ruins.

This first impression, however, is a mistaken one. The true standard by which to judge Petrograd is not by

carefully preserved, are crowded by parties of soldiers from the Red Army and of school children. The people are poorly dressed, but they seem to have enough to eat. The children play happily about the streets and squares. The frowzy Nevski matters nothing to them—they cannot remember having seen it otherwise.



E N A

ONE OF PETROGRAD'S WELL-BUILT RAILWAY STATIONS

The Tsarskoye Selo station stands off the Zagorodni Prospect in the Moscow quarter of the city. It is named after Tsarskoye Selo, a town lying 15 miles away to the south, once a very popular country resort of the inhabitants of Petrograd. The railway which connects it with the capital and has its terminus in the station buildings seen above was the first railway to be built in Russia

comparison with what it was before the revolution, but by comparison with what it was in 1920, three years after the revolution. Then, indeed, one might have said it was doomed. The population had been reduced from two and a half millions to seven hundred thousand. Those who remained were half starved. The workshops were closed. The streets were almost deserted. But then the population began to return. It doubled in the next four years.

The churches, both Orthodox and Catholic, are again thronged with worshippers. The wonderful picture galleries of the Hermitage, with its old masters, and of the Alexander Musée, with its examples of modern Russian art, all

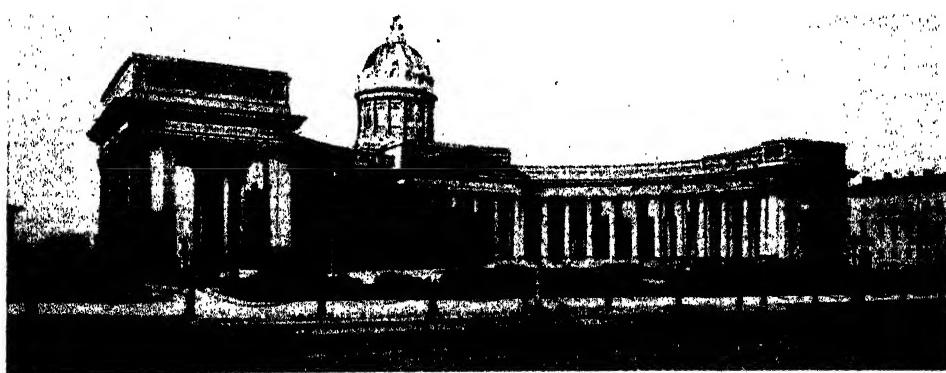
And trade is returning. The factories are working. It is true that the Nevski still looks like a second-rate street in a provincial town, that it is no longer the fashionable quarter. The old social class for which it existed has been exterminated. Russia is in the hands of new masters, drawn from a different order of society, with different habits, different tastes and a different outlook.

The new centre of activity is to be found in the Gostini Dvor, and in the open-air markets round Sadovaya Street. All the little shops and booths are open and the streets are thronged with shoppers and pedlars. It is like an Oriental bazaar. Here, and not in the Nevski, the heart of Petrograd now



S. J. Beckett

EXTENSIVE BUILDING OF THE ADMIRALTY FACING ALEXANDER GARDEN
 The Admiralty consists of a central structure, 458 yards long, and two wings. Over the entrance which faces the Alexander Garden a fine tower with a gilded spire rises to 230 feet; the lantern of the tower is embellished with twenty-eight pillars and twenty-eight statues, while on either side of the gateway is a group of three colossal female figures supporting on their shoulders the terrestrial globe.

**KAZAN CATHEDRAL, STATELY SHRINE OF CHRISTIAN RUSSIA**

Kazan Cathedral, standing off the Nevski Prospect, is modelled on S. Peter's at Rome and flanked by a semicircular colonnade of 136 Corinthian columns, and has a beautiful metal dome 65 feet in diameter. In this large square many a reverent multitude has knelt in prayer; now the Soviet war against religion is doing its best to abolish all outward demonstration of Christian faith and worship.

beats. The Nevski was Europe. The Gostini Dvor is Asia.

I do not venture to predict the future of Petrograd, save that it will not die. It is true it was only founded two centuries ago, and is, therefore, of mushroom growth compared with most other great European cities. But this region has always been of prime importance in the relations between East

and West. The Neva is a northern Suez Canal. It is one of the gateways between Europe and Asia.

By this route came Rurik and his fellow Vikings who founded the Russian Empire. By this route the Hanseatic traders trafficked with the Caspian and the Black Sea. And Petrograd, which belongs to the North, is still the link between Soviet Russia and Europe.



PETROGRAD'S ORNATE BYZANTINE CHURCH OF THE RESURRECTION

On the spot where Tsar Alexander II. was assassinated by Nihilists in 1881 stands the Church of the Resurrection. Built of marble, granite and coloured bricks, and lavishly adorned, especially the interior, with multi-hued mosaic, the church with its nine domes overlaid with mosaic, gilt and enamel vies in its rich Oriental fantasy with the church of S. Basil at Moscow—see page 2839

PHILADELPHIA

Third City of the United States

by C. Lewis Hind

Author of "Things Seen in America"

THE chief city of Pennsylvania, founded by William Penn, was once the largest city in the United States; but New York and Chicago have outstripped Philadelphia in extent and population. To-day Philadelphia ranks third. It is familiarly known as the "City of Homes." The countless "homes" in its 1,600 or so miles of streets are laid out with absolute chess-board regularity.

When the British traveller emerges from Broad Street Station, on the Pennsylvania Railroad, and regards the crowds and the smoky atmosphere, his thoughts may recur to Manchester or Liverpool. The first impression is not encouraging: the traveller has, as yet, no vision of the rivers Delaware and Schuylkill between and about which the city lies; or spacious Fairmount Park, or the many small parks generally known as squares, or the miles of little, neat houses.

He sees, he cannot help seeing, the vast, costly and dingy City Hall, with a statue of William Penn on the top, that straddles two of the principal streets, impeding the flow of traffic. Begun in 1872 the projectors can hardly have realized how Philadelphia would grow, or how the City Hall, by its awkward site and size, would add to the ever increasing difficulties of the traffic problem.

An Embarrassment of Riches

Nor can they have foreseen the huge improvement scheme determined upon in 1891 when it was decided virtually to break up and break down part of the city and form a great boulevard and system of plazas and open spaces, to be called Fairmount Parkway,

extending from City Hall to the south-eastern end of Fairmount Park.

This magnificent scheme has passed through many vicissitudes, mainly financial. One Philadelphian called it a "paper dream." And the scheme was complicated by the inability of the authorities to make up their minds regarding the method of exhibiting the very remarkable collection of pictures bequeathed to Philadelphia, under certain conditions, by John G. Johnson. The city also received by bequest four other private collections. These were all to be enshrined in a veritable Temple of Art on an eminence at the end of Fairmount Parkway.

United States' Second Port

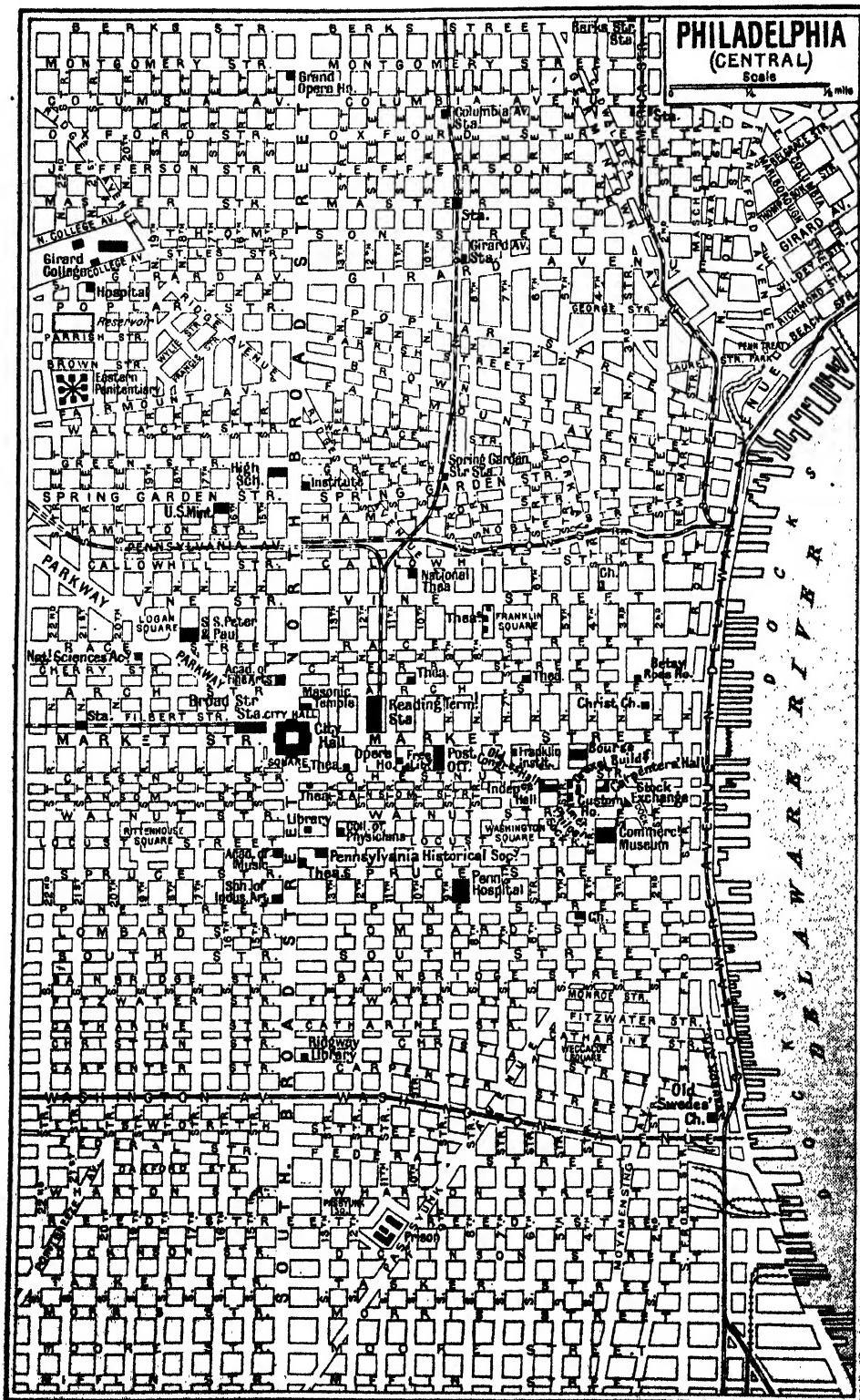
Before considering the history of Philadelphia some further words may be said about present conditions. The population approaches 2,000,000. In 1820 it was 137,097. There is a large foreign element. Ireland heads the list, and is followed, in order of percentages, by Germany, Russia, England and Italy. In regard to manufacturing industries Philadelphia is third among the cities of the United States.

As a port Philadelphia, 88 nautical miles from the sea, ranks second in the country. The water frontage is about 20 miles on the Delaware river and 17 on the Schuylkill. The main activities of the port are centred along a water frontage of about six miles. There are nearly 300 wharves.

Besides the wonderful collections of pictures bequeathed to the city, there are many excellent private collections, including the Widener, stored with many masterpieces, and those of John Braun, Simpson, Cassatt, Lewis, Micheson,

PHILADELPHIA

3220



MIGHTY GROWTH OF THE CITY OF WILLIAM PENN

McVitty and others In the Philadelphia Orchestra Association the city maintains one of the foremost musical organizations in the country. The Curtis building, from which are published those famous journals, "The Saturday Evening Post," "The Ladies' Home Journal" and "The Country Gentleman," claims to be the largest structure devoted to the printing of periodicals in the world.

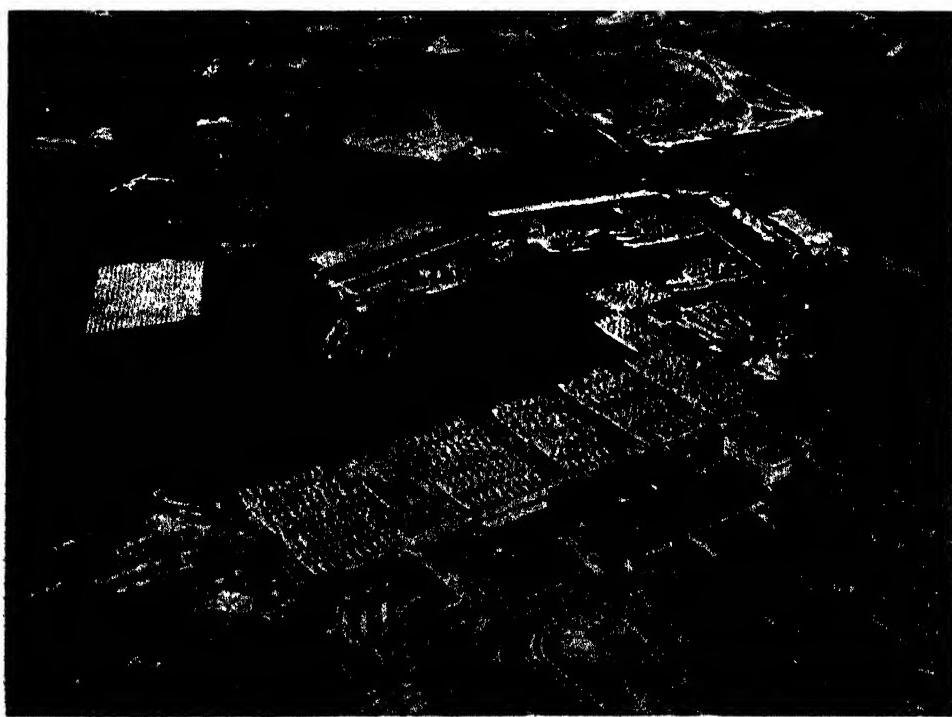
The guide books still call Philadelphia the "City of Brotherly Love," or "The Quaker City," and wandering among the miles of streets, with the miles of little red brick houses with green shutters, and about the neighbourhood of Independence Hall, which is the old State House, one can still feel the influence of William Penn. To him we now turn.

When in 1681 William Penn, an English Quaker, obtained from Charles II. a grant of territory in North America, in lieu of his claim against

the crown for £16,000, a plan, the first dim outlines of which had long been in his brain, took definite shape. There, in the New World, on that virgin territory, he would establish a "fair city," where men of all races might live and practise their religion undisturbed by the persecution to which he and many of his co-religionists had been subjected.

His first step was to appoint three commissioners, with instructions to proceed to the territory (now the state of Pennsylvania) and there choose a site suitable for the city he had in view. His next was to draw up a prospectus giving particulars of the cost of the trip, the buying and renting of the land and the opportunities open to agricultural and mechanical labour. So alluring was the prospect of freedom from persecution that Penn had no difficulty in finding settlers for the new colony.

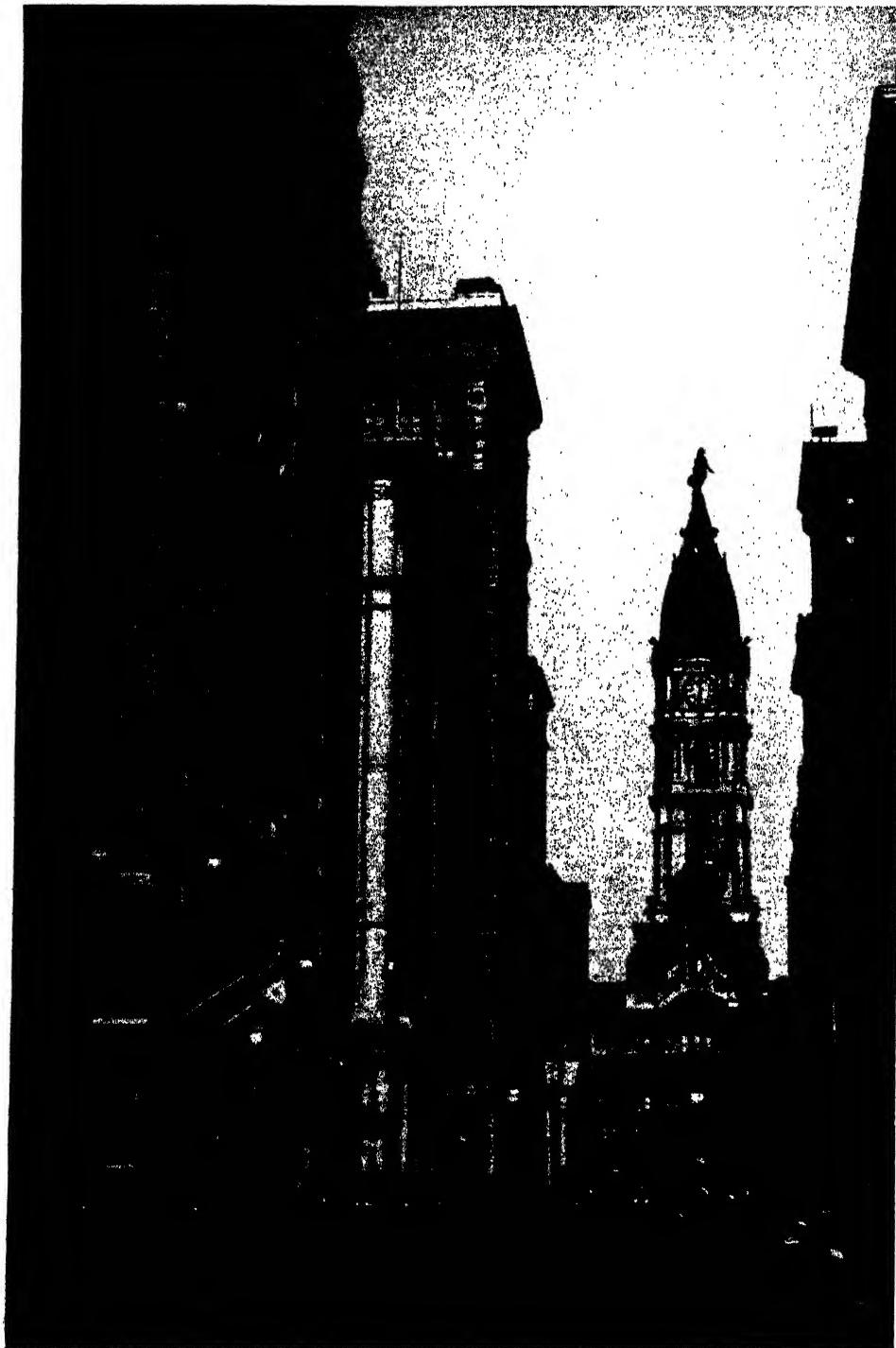
He then set about framing a constitution, assisted by Algernon Sidney. Its chief feature was its insistence on



Sport and General

WARSHIPS IN THE GREAT NAVY YARDS AT LEAGUE ISLAND

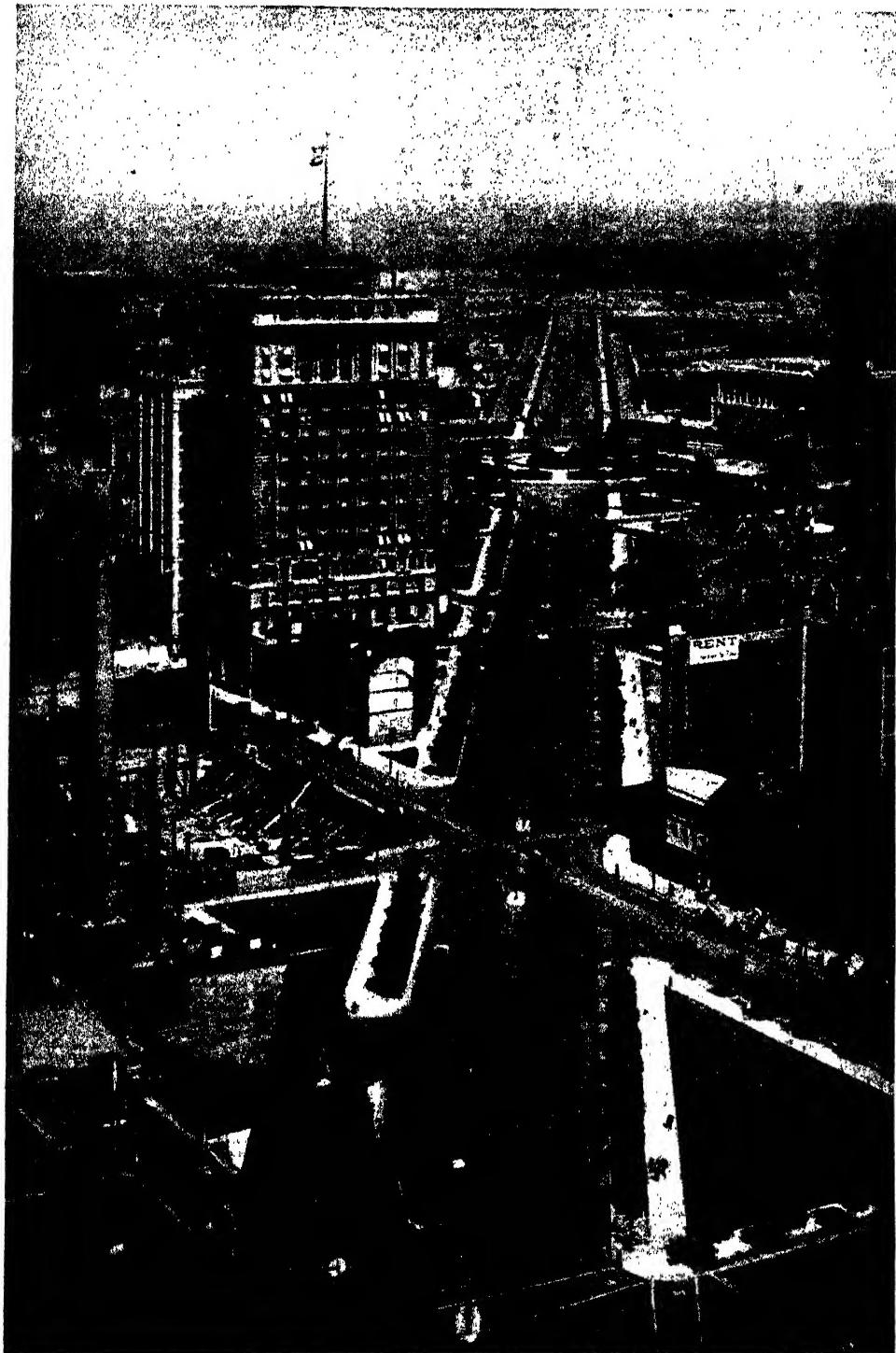
In the Delaware river above Philadelphia lies League Island which is devoted to huge navy yards extending over many acres. The city has over 30 miles of river front with the principal docks along the Delaware, the facilities on the Schuylkill being relatively unimportant. Philadelphia, besides being a great port, ranks next to New York and Chicago as a manufacturing centre.



E. N. A.

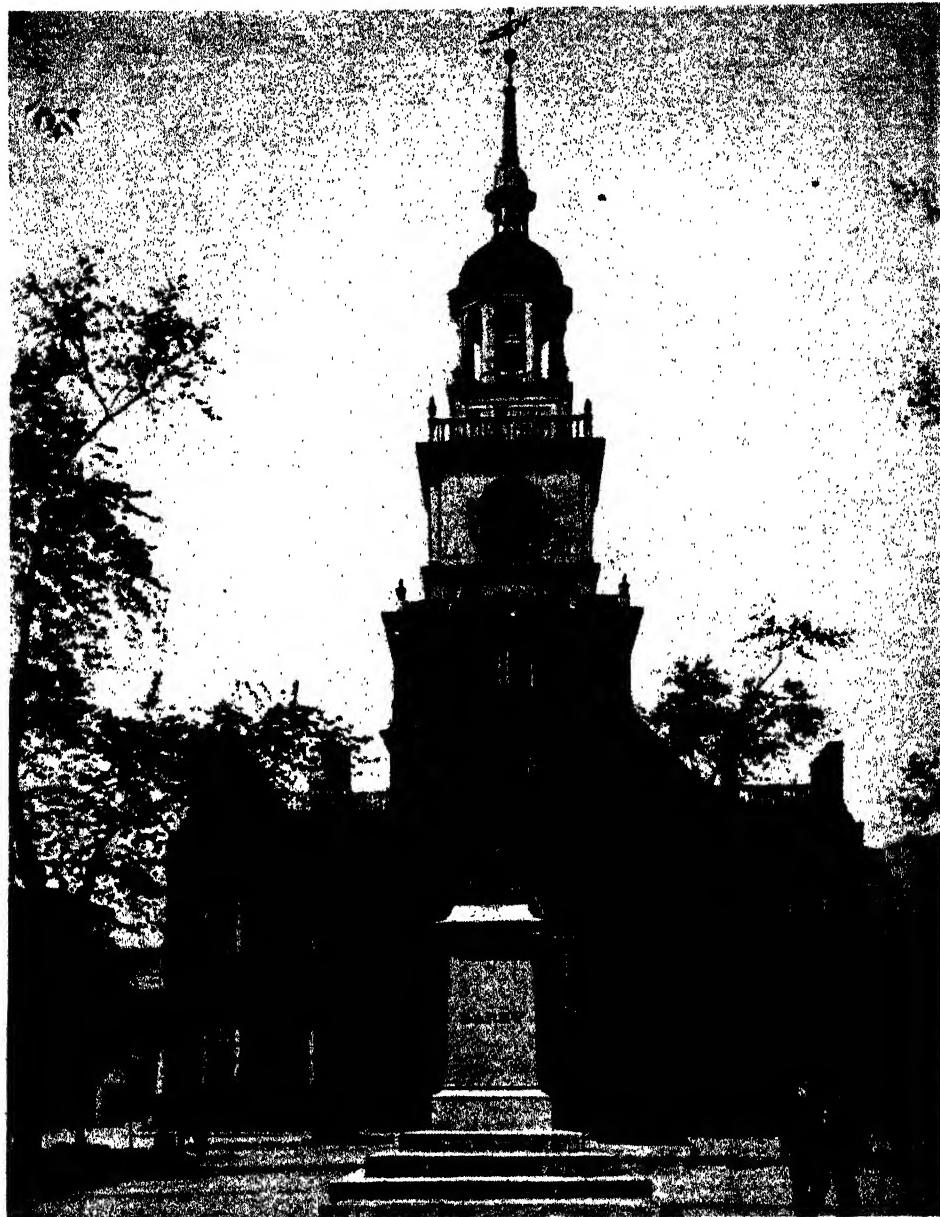
LOOKING DOWN BROAD STREET TOWARDS THE CITY HALL

City Hall Square lies at the intersection of Market and Broad streets and in it stands the City Hall, or Public Buildings, which houses the municipal offices together with the state law courts. It is a marble structure in the French Renaissance style covering an area of $4\frac{1}{2}$ acres. The tower is 537 feet high and is surmounted by a 37-foot statue of William Penn, the founder of Philadelphia



SPLENDID PARKWAY RUNNING FROM THE CITY HALL TO FAIRMOUNT PARK

This magnificent thoroughfare which was completed in 1924 has been driven through a congested area of narrow streets and dingy buildings. It starts from City Hall Square; passes through Logan Square, in the middle distance, and terminates at the entrance to Fairmount Park where a Temple of Art is to be erected. On the right is the dome of the Roman Catholic cathedral of SS. Peter and Paul.



Ewing Galloway

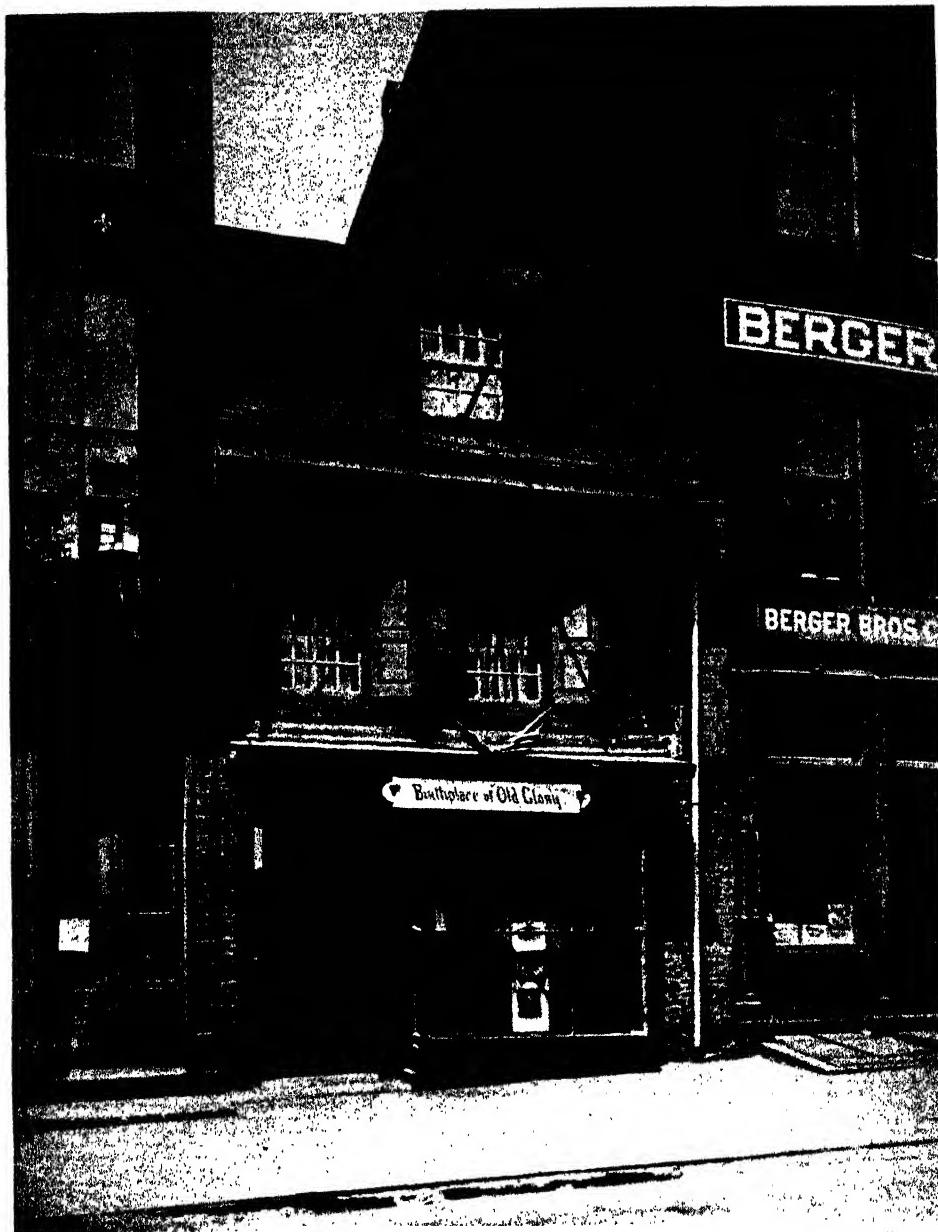
INDEPENDENCE HALL AND BARRY STATUE IN CHESTNUT STREET

Philadelphia in Independence Hall possesses one of the most famous historical monuments in the United States. The Second Continental Congress met here during the American Revolution and within these walls the Declaration of Independence was adopted on July 4, 1776. The structure was begun in 1731, the steeple added later and the whole restored in the nineteenth century.

tolerance for every form of Christianity, for " freedom for all persuasions in a sober and civil way."

Penn himself visited Philadelphia in 1682, and was at first eloquent in his enthusiasm. " Oh, how sweet is the quiet of these parts, freed from the

anxious and troublesome solicitations, hurries, and perplexities of woeeful Europe," he wrote. In November of the same year Penn made his famous treaty with the Indians at Shackamaxon—a treaty of which Voltaire remarked that it was " the only treaty



Ewing Galloway

BIRTHPLACE IN PHILADELPHIA OF THE FLAG OF THE UNITED STATES
No. 230, Arch Street, is the house where Betsy Ross made the first flag of the stars and stripes according to the design laid down by a committee of Congress and George Washington in 1777. It has been preserved in its original condition and a tablet on the wall commemorates the birth of the flag. Near here is the graveyard of Christ Church where Benjamin Franklin was buried.

between savages and Christians that had not been ratified by an oath, and that was never broken."

As time went on, however, Penn's enthusiasm was to be quenched by the course of events. His dream had been of a beautiful city, nobly planned, and

it grieved him to see the inevitable triumph of the commercial over the picturesque. Serious difficulties arose over the unsettled boundary line, and at last he deemed it wise to return to England and lay the matter before the Privy Council. This he did in 1684.

Fifteen years elapsed before he returned to Pennsylvania, and during that time strong opposition had been growing to his proprietary powers. The idea occurred to him of solving the problem by urging the conversion of Pennsylvania into a royal province, but before he could put it into execution he died.

Wars Against the Indians

After his death the proprietary rights passed to his descendants, and for many years Philadelphia grew in size and prosperity. But trouble was brewing. Penn's wise treatment of the Indians was not continued by his descendants, and many of the frontiersmen considered it absurd to talk about the rights of savages, and had no scruples about occupying the Indians' lands, and no hesitation in shooting those who attempted to resist their depredations.

Not unnaturally the Indians determined on revenge. Their alliance with the French and the overthrow of the British forces at Fort du Quesne left Pennsylvania at the mercy of her enemies. The Treaty of Paris in 1763 ended the war with France, but the settlers, having learnt nothing from experience, still continued their ruthless treatment of the Indians, who, led by Pontiac, once again rose against the whites. When Colonel Bouquet, after his victorious campaign, entered Philadelphia, the Assembly willingly voted the money for the expenses of his army.

Quarrelling with the Quakers

The proprietors refused, however, to give their share, and it was this final quarrel with the Quakers—with whom they had been in disagreement from the beginning of the struggle—which led to the petition to the crown for the abolition of the proprietary government. In 1764 Benjamin Franklin went to London to present the petition to George II., but the latter was not prepared to accept this opportunity of strengthening his power.

From that moment events moved rapidly. In 1765 the Stamp Act was

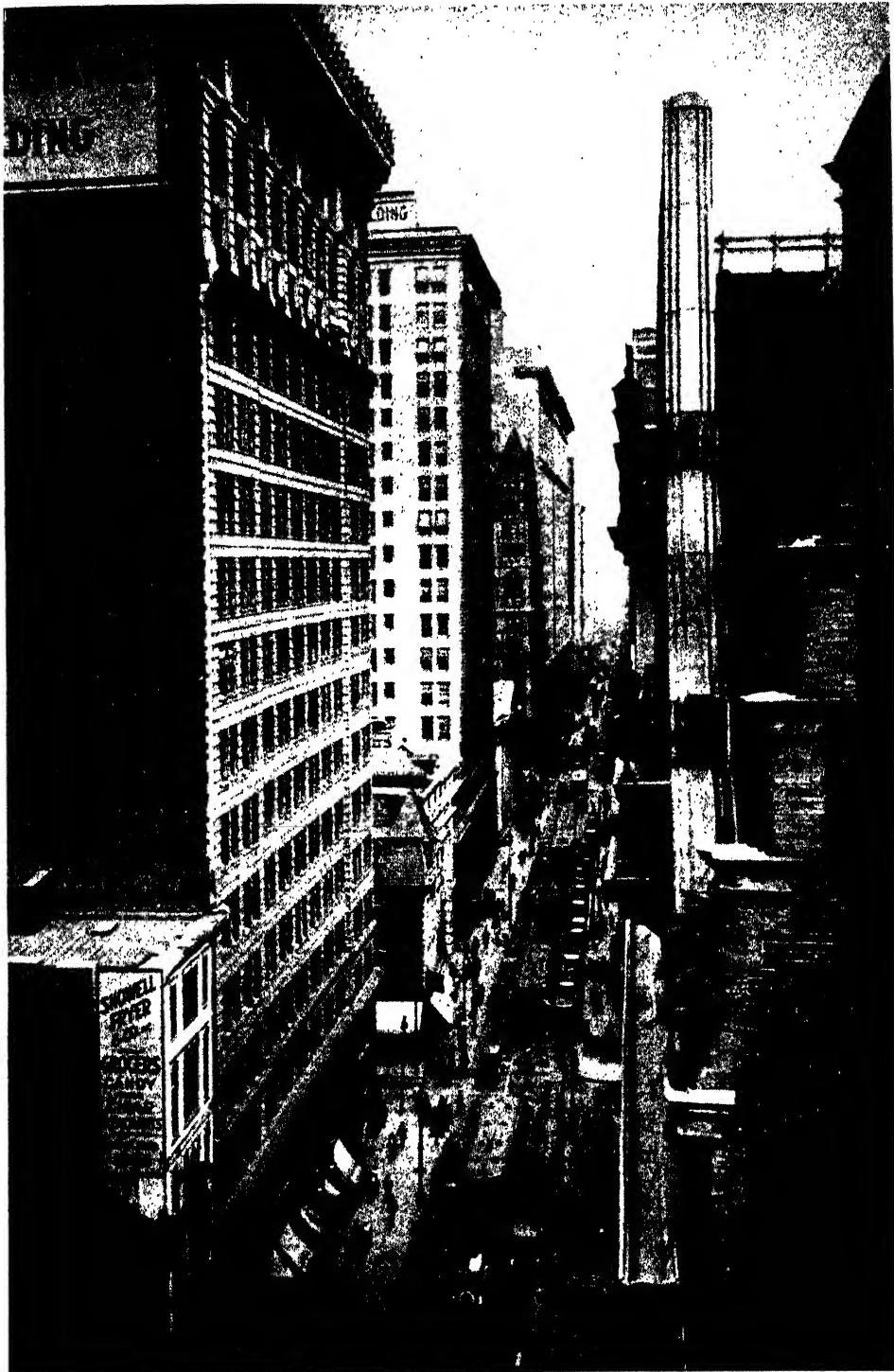
passed and roused bitter hostility among the colonists. Even its repeal the next year did little to allay the general dissatisfaction. Indeed, when an Act of Parliament permitted the East India Company to carry tea to America free of all duty, save for a very small colonial tax, instead of easing the situation it tended merely to harden the opposition of the colonists. Revolution was in the air, and when, in April, 1775, came the news that British soldiers and the New England militia had fired on each other at Lexington, the colonists realized that the great struggle for independence had at last begun.

For the next six years Philadelphia's history is inseparably bound up with the history of the United Colonies. After the encounter at Lexington, Congress reassembled and appointed a committee of safety, with Benjamin Franklin at its head; and in June of the same year George Washington was appointed commander-in-chief.

From Independence to Civil War

In 1775 Richard Lee drew up his resolutions for the freeing of the colonies from their old allegiance and proclaiming them free and independent states. Out of the thirteen colonies concerned, seven were in favour of the resolutions, but the rest, with Pennsylvania as their leader, refused their assent. Gradually, however, the enthusiasm of the majority outweighed the hesitation of the minority and by sunset, on July 2, 1776, Lee's resolutions were passed almost unanimously. Two days later the famous Declaration of Independence was adopted.

On September 26, 1777, the British army under General Howe entered Philadelphia, and there it remained for nine months. In 1779 Congress celebrated the long-delayed and desired alliance with France, and on October 19, 1781, a hundred years after the founding of Philadelphia, bells were rung and salutes fired to celebrate the surrender of the British army at Yorktown.



Ewing Galloway

NARROW CHESTNUT STREET HEDGED BY ENORMOUS BUILDINGS

Chestnut Street runs due east across West Philadelphia and continues past the Baltimore and Ohio railway station to the west bank of the Delaware. This thoroughfare is one of the main streets in the city and contains many of the best shops and offices of the leading banks. The photograph was taken at the corner of 16th Street looking across Broad Street towards the Post Office and Free Library.



E. N. A.

IMPOSING COLLEGE HALL OF THE UNIVERSITY OF PENNSYLVANIA

West Philadelphia, that portion of the city beyond the Schuylkill, contains the buildings of the University of Pennsylvania founded in 1750. The university comprises about thirty buildings and has an area of 60 acres. The students number nearly 10,000 and there are law, dental and medical schools. Not far from here is the Drexel Institute, devoted to industrial education.

But the "City of Brotherly Love" was not long to enjoy the blessings of peace. In the American Civil War Philadelphia was not slow to answer the call for men and more men, and when at last in 1865 the old State House bell announced the good news that the fighting was over, the city's joy was shadowed by the terrible losses she had sustained during the course of the war.

Many buildings of historic interest still stand to-day. The old State House or Independence Hall, already mentioned, in Chestnut Street—many of the streets in Philadelphia bear the names of trees—is the most famous. It was begun in 1731 and completed in 1753. In the east room on the first floor the Second Continental Congress met, and here also, on July 4, 1776, was adopted the Declaration of Independence. On the walls of this room are portraits of forty-five of the fifty-six signatories of the Declaration, and a portrait of Washington, by Peale.

The famous Liberty Bell, which has passed through vicissitudes and is sup-

posed to have been rung to summon the people of Philadelphia to the reading of the Declaration, is at the head of the stairway and bears the inscription, "Proclaim Liberty throughout all the land and to the inhabitants thereof." The Liberty Bell has been a feature of every International Exposition.

Carpenter's Hall, which stands back from Chestnut Street, was begun in 1770. Here the First Congress met in 1774, and much of the furniture used during this time, as well as other Revolutionary relics, is still religiously preserved in the building.

The oldest building in Philadelphia is the old red brick church in Swanson Street, Gloria Dei, which was built in 1700 on the site of the primitive chapel erected by the Swedes before William Penn's ships sailed across the Atlantic.

Christ Church, which stands between Market and Arch streets, begun in 1727 and finished in 1754, is of particular interest, as it was for many years the headquarters of the Anglican party, who were opposed to the Quaker founders of

the city and their tolerance of all forms of Christianity. The pews in which Washington and Franklin worshipped are still preserved.

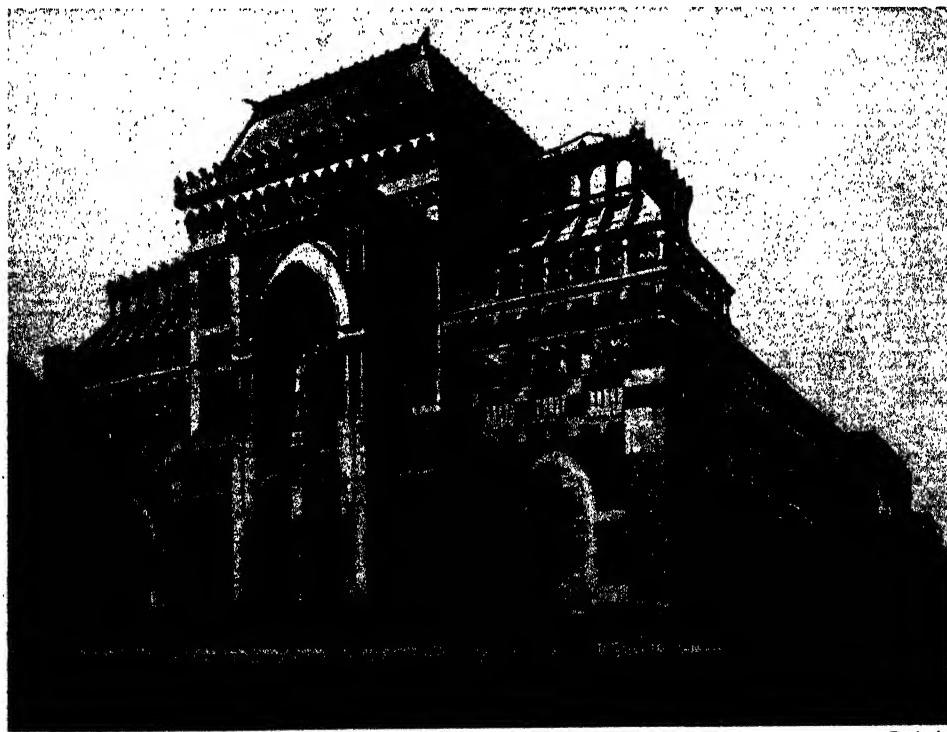
In striking contrast to these old buildings, made as they are of red brick, simple in construction but substantial and imposing, are the many fine structures built early in the nineteenth century. The Old United States Bank, now the United States Customs House, the United States Mint and Girard College are all of white marble, with porticos and fluted columns in the Ionic style.

The City Hall, already mentioned, begun in 1871, the home of the city and court offices and of all the country courts, has the questionable distinction of being the largest civic building in the world. The statue of William Penn which crowns the dome is in itself 37 feet high. But size alone does not, unfortunately, ensure beauty, and the vast bulk of the City Hall stands as an example of the worst

period of architecture in the whole history of Philadelphia.

The "City of Homes" has not been altogether happy in her architecture. The quiet beauty, the noble proportions which characterise her colonial buildings only serve to show up the depressing ugliness of much of her later architecture. But new men have arisen and begun to raise public buildings and private residences more in keeping with her earlier architecture, and having something of the dignity and restraint which was characteristic of it.

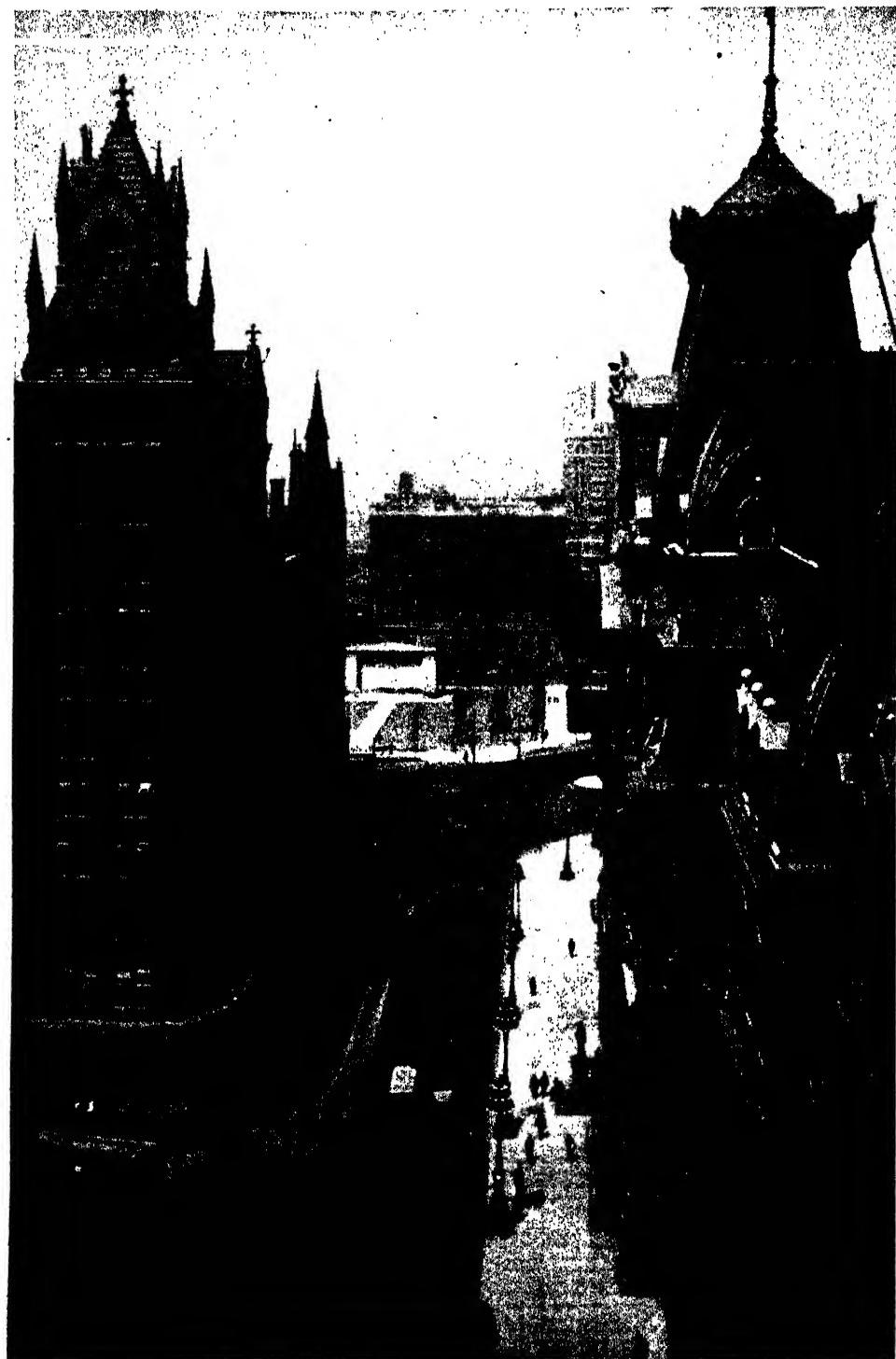
Fairmount Park, over 3,000 acres in extent, is one of the most beautiful public playgrounds in the world. Here, even though the suburbs crowd ever closer and closer, and higher and higher rise the great commercial buildings, may still be felt something of the founder of Philadelphia's love for green fields and woods. The river Schuylkill winds its way through this lovely park.



HUGE ACADEMY OF THE FINE ARTS IN NORTH BROAD STREET

At the corner of Cherry and North Broad streets stands the Pennsylvania Academy of the Fine Arts, a building in the Venetian style. The academy was founded in 1805 and has a vast collection which includes over 500 paintings, numerous sculptures and 50,000 engravings. There is an exceptionally good collection of the works of the early American school.

Topical



Ewing Galloway

TRAFFIC FLOWING ROUND THE HUGE ISLAND OF THE CITY HALL

Broad Street Station on the left, the terminus of the Pennsylvania railway, stands on the west of City Hall Square. Flanking it is Market Street over which passes a bridge connecting the station with the Arcade Building. Market Street—Penn's original High Street—is the principal thoroughfare running east and west, and terminates at the Delaware in a quarter of important business houses

As is befitting in a city known as the "City of Brotherly Love," Philadelphia boasts a large number of charitable institutions, the most important being the Pennsylvania Hospital, first projected by Benjamin Franklin and Dr. Thomas Bond in 1751. On its cornerstone is cut this quaint inscription :

" In the year of Christ MDCCCLV,
George the Second happily reigning,
(For he sought the happiness of his people)
Philadelphia flourishing
(For its inhabitants were public-spirited)
This Building,
By the bounty of the government,
And of many private persons,
Was piously founded
For the relief of the sick and the miserable.
May the God of Mercies bless the under-
taking."

The University of Pennsylvania dates back to 1750. In 1749 Benjamin Franklin published his proposals relative to the education of youth in Pennsylvania, and the academy and charitable school which was established as a result of these proposals became a college in 1755 and was incorporated as a university in 1779.

" Only Samples of Weather "

After the revolution inertia settled upon the college, but that is all past and to-day the University of Pennsylvania finds the space it occupies all too small. Girard College, founded by Stephen Girard, and completed in 1847, provides free education for poor orphan white boys. A few miles out of Philadelphia is Bryn Mawr College, founded in 1880 by Dr. Joseph W. Taylor, for the higher education of women.

In his letter to the Free Society of Traders in 1683 William Penn was enthusiastic in his praise of Philadelphia's climate, but he appears somewhat to have changed his mind on closer acquaintance. Writing to Lord North later he observed that "the weather often changeth without notice and is constant almost in inconstancy." But perhaps M. Bourget described it most accurately—and at the same time wittily—when he said : " No climate at all—only samples of weather."

The Pennsylvania Academy of Fine Arts has the distinction of being the oldest institution of its kind in the United States. The first Academy building was in Chestnut Street, but it was replaced in 1876 by the present structure in Broad Street. There is a delightful passage, naive and noble, in the petition signed in 1805 by 71 citizens for the incorporation of the Academy.

The Petition of the Citizens

It runs thus: " To promote the cultivation of the Fine Arts, in the United States of America, by introducing correct and elegant copies from works of the first Masters in Sculpture and Painting, and by thus facilitating the access to such Standards, and also by occasionally conferring moderate but honorable premiums, and otherwise assisting the studies and exciting the efforts of the artists, gradually to unfold, enlighten, and invigorate the talents of our countrymen."

To the undiscerning eye the Philadelphia of to-day may perhaps bear little resemblance to the Philadelphia of Penn's days. And yet, in spite of the bustle of modern life, there still remains something of the restraint, of the modesty which characterised her in the days of her infancy.

William Penn's Farewell

Indeed, as one wanders round her old colonial buildings, with their simple grave beauty, the words of William Penn, when he said farewell to the colony he had founded and loved, come again to one's mind :

" And thou, Philadelphia, the virgin settlement of this province, named before thou wert born, what care, what service, and what travail has there been to bring thee forth, and preserve thee from such as would abuse and defile thee. Oh, that thou mayest be kept from the evil that would overwhelm thee ; that, faithful to the God of thy mercies in the life of righteousness, thou mayest be preserved to the end."

Ewing Galloway
THE MALAY ARCHIPELAGO

NEAR THE HARBOUR OF MANILA, CHIEF PORT OF THE LARGEST ISLAND GROUP IN THE MALAY ARCHIPELAGO
Manila was founded by the Spaniards in 1571 and fortified by strong defensive works. Later it passed into the hands of the Dutch and was for a short period occupied by the British. Spanish rule again established itself and after the treaty of peace concluded in 1899 between Spain and the United States, the Philippine Islands were ceded to the United States. Manila is now the first city and chief port of the island group; electric lighting, water supply, telephone and a tramway system have been provided and the harbour has been greatly improved, the bulk of overseas shipments being made from the port.

PHILIPPINE ISLANDS

America's Empire in the Pacific

by Leopold Spero

Author of "Ports and Cities"

IN the year 1823 the President of the United States made that superb gesture of Imperial warning known as the Monroe Doctrine, the interpretation of which, not only in the United States but in Europe, has been as grave a puzzle as any problem of international affairs of the past century.

That passage into the tortuous ways of European diplomacy sufficed for a long period, until at the end of the nineteenth century America found herself at war with Spain, and in possession of a colonial empire before she quite knew what it meant. Since then, the Philippine Islands have been the subject of the keenest interest to the American public, after their acquisition in 1899.

There is cause enough for this interest. The Spanish rule in the islands, established in 1569, was monstrous. Magnificent cathedrals, raised by the extraction of ruthless taxation from the wretched native, towered nobly in the midst of starving villages. Corruption and oppression were the order of the day, and the consequent insurrections, the last of which had been going on for two years before Admiral Dewey fired his dramatic first shot in Manila Harbour, provided a theme for many a soft-hearted New England propagandist long before the oppressor was finally forced from his seat by a power greater than his own, and the liberator took up the doubtful task of pacification.

Burden of Spanish Rule

The dramatic opening of the Spanish-American War in Manila Harbour fixed the attention of the American public upon this distant and romantic land. That attention has been concentrated to such profitable purpose that the value

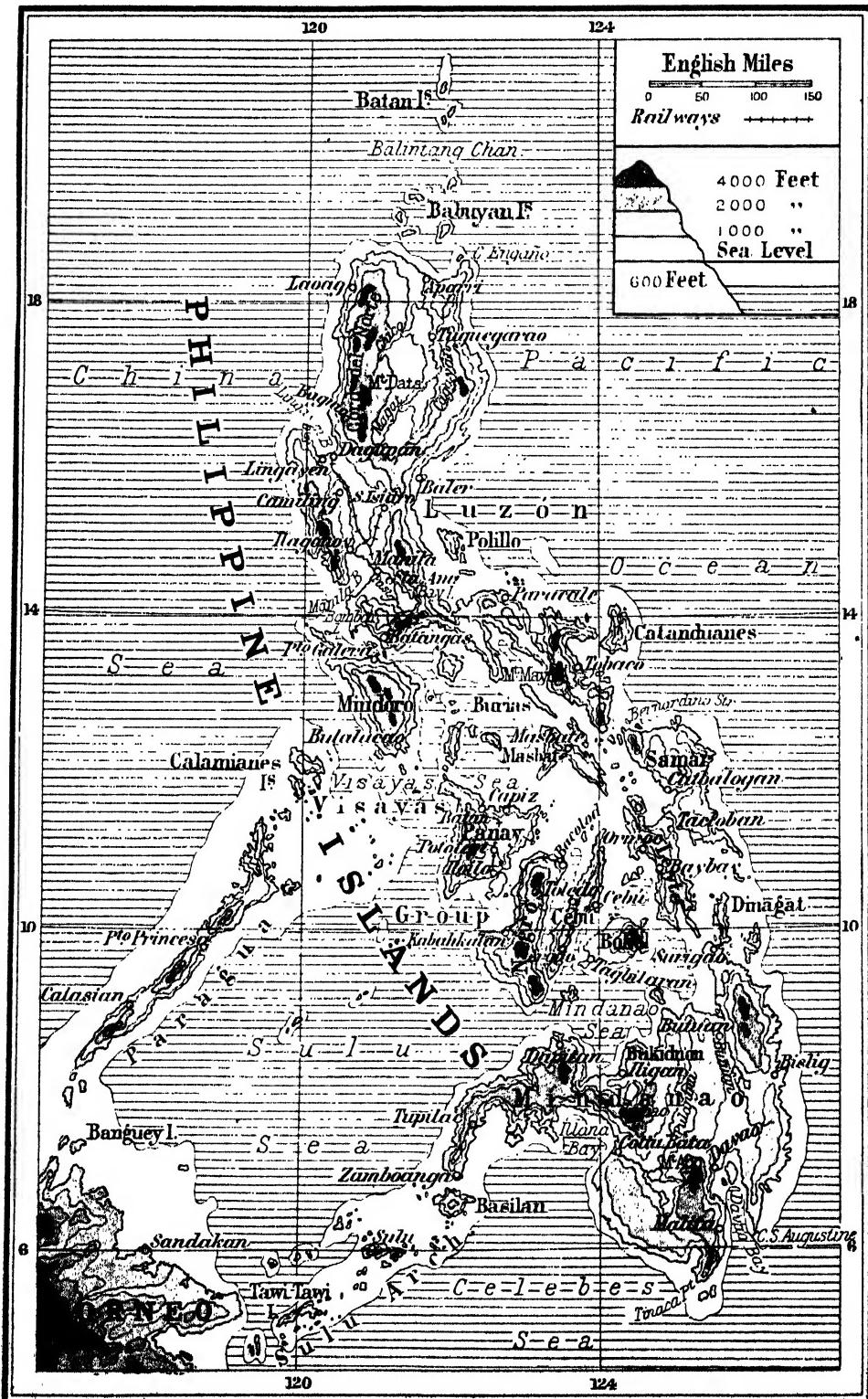
of the commercial production of the islands rose in 1910 to something like eighteen million pounds, and by 1918 had reached a total of thirty-seven millions.

Until the coming of the Americans, the trade of the Philippines, instead of enjoying official support, found only obstruction and graft in its path. The cargoes shipped from Manila and Cebú and Iloilo to the ports of the Far East, of the Dutch Indies, of Australia, America and Europe were carried in British, American, Dutch, Japanese and German bottoms. The Spaniards cared nothing for the future of the islands, but only for what they could get by interposing their palms between the parties of commerce.

Archipelago of 7,000 Islands

They left so much to be done that the appeal to American energy and enterprise was irresistible. And to-day, instead of being noted for little else than hemp and a certain amount of coffee and copra, the Philippines produce a variety and quantity of essential commodities which have raised them to heights of prosperity comparable with that of the richest islands in the Southern Seas.

The archipelago of the Philippines stretches from the north of Borneo to within a day's steaming of Formosa. It contains probably more than 3,000 islands and about 4,000 islets, many of them no more than rocks and reefs, the largest islands being Luzón, 40,814 square miles, and Mindanao, 36,906. The rest of the larger islands, to which the collective name of Visayas is given, include Mindoro, 3,794 square miles; Paragua, or Palawan, 4,500; Samar, 5,124; Panay, 4,448; Negros, 4,902;



HUDDLED FESTOON OF VOLCANIC ISLES AND ISLETS

Leyte, 2,799; Cebú, 1,695; Bohol, 1,534; and Masbate, 1,255. The entire group has an inclusive land and water area of 115,026 square miles.

Like the rest of the great chain of islands that stretches from Japan to Sumatra, the Philippines are a volcanic formation, and from Luzón, in the north, to Mindanao, in the south, they are cut by mountain ranges which leave little room for plain-land, save where the rivers run into the sea. Many of the volcanoes throughout the archipelago are still active, as the inhabitants have known to their cost on more than one tragic occasion. But, by a happy kind of homeopathy, the earthquake shocks have been mild though frequent and the population adapts its habits and architecture accordingly.

Compensation for the volcanic uncertainties of life in the Philippines is found in the immensely valuable forest lands and the fertile soil, which, in the efficient hands of American agriculture, produces to-day harvests more bountiful than the indolently-minded native ever thought of or hoped for. There are 40,000 square miles of virgin forests, containing immense potential wealth in lumber, charcoal, rattans, fibres, dye-woods, rubber, tan-barks, wood-oils and medicinal plants; and the new government School of Forestry has a great task before it in the marketing of these products.

The climate of the Philippines, though tropical, is tempered by sea breezes. November to January, the coolest months, enjoy an average mean temperature of between 77° and 79° F. In the hot season, which lasts from April to June, it is between 83° and 84°, and



W. Wimbeldon Hill

MAIN BUSINESS ARTERY OF MANILA

The Escolta houses the leading business firms of the city of Manila, its junction with the Bridge of Spain being the chief centre of commercial activity. In the distance, at the eastern end of the Escolta, Santa Cruz Church is dimly seen

for the remainder of the year a steady and equable 80°. Very rarely is a temperature of 100° reached. The indented coast-line of 11,000 miles—greater than that of the entire United States—makes for temperate conditions, and with the improvement of drainage and sanitation the chief towns have become very pleasant for the rapidly-increasing American and European commercial population.

Sport of all kinds is enjoyed and fostered amid surroundings of great beauty. Malaria and other disorders, once so prevalent as to be endemic, are rapidly being stamped out even in the remoter districts. And whereas, under Spanish misrule, the very surroundings of Manila itself were fever-ridden and noisome with the lurking perils of undrained swamp and marsh, American engineers have drained, relaid and



W. WIMBLEDON HILL
THE VARIETY OF FILIPINO CRAFT

SECTION OF THE PASIG RIVER NEAR THE CITY OF MANILA, SHOWING THE VARIETY OF FILIPINO CRAFT

The city of Manila is situated on the west coast of Luzon island at the point where the Pasig river flows into Manila Bay. Of the population, estimated at over 24,000, between 15,000 and 20,000 make permanent homes on floating craft in the Pasig river and in the numerous inlets. Here they are born, and here they grow up; marry, trade and die, apparently leading lives of sheer contentment in this Venice-like city of the East. Rules of the river appear to trouble the Filipino river men very little, for long chains of bamboo rafts and coconut rafts fill the stream with little or no consideration for other users.

reconstructed, turning unhealthy wastes into "desirable modern suburbs."

The fashionable promenade of Luneta, where smart Manila drives in the evening when the fireflies glitter in the purple dusk, where the military band plays and the Filipino buck goes promenading with his dainty little lady-love, was reclaimed from the sea. The Escolta, Manila's Regent Street, holds its head as proudly as any of Shanghai's prosperous highways. The Chinese shopping district of Binondo and the European garden city of Ermita speak volumes for the efficiency of American rule.

No more vivid contrast could be imagined than the world of difference between Intramuros, the old, neglected, picturesque walled city of the Spanish domination on the southern side of the Pasig river, and the new suburbs on both sides of the water, built by the Americans, with their good roads, electric trams, fine open spaces for sports and brisk air of activity and commercial vigour.

Material for Confusion

This is not to say that the United States had an easy task in the creation of order and prosperity amid such a tangle of conflicting races and religions. The population of between ten and eleven millions includes nine millions and a half of so-called Christians, whose Roman Catholicism, though more than three hundred years old, is not exactly of the Higher Critical order. Add to these about a million so-called Mahomedans and thirty to fifty thousand pagans, franker in their religious pretensions than their fellows, and there is material enough for confusion.

But there are fifty thousand Chinese, always in some sense a problem, despite their excellent civic qualities; seven or eight thousand Japanese; and the last remnant of haughty Spain, living in its own ruined courtyards, proud, unassimilable, with a pathetic nobility of bearing which commands respect.

The Spaniards never made their language more than partially the tongue

of the Filipinos, even in the districts near the large cities. English has made far more progress of recent years. And the curious but quite intelligent policy of the American administration in preserving at least one of the many native languages, the Tagalog, while teaching the writing of it in the English alphabet, has tended to create a desire to learn English among the younger generation, whose parents were bi-lingual and spoke a certain amount of Spanish learnt from their former masters.

Outlet in Local Administration

The other languages in Luzón and the islands close by are likely to die out, but this will not be the fate of the Visaya tongue, spoken in the island of Mindanao, which is as vigorous a growth as the turbulent spirits of the tribes that speak it.

The standard of literacy to-day is undoubtedly high among the Filipinos, whatever it may have been before the Spaniards left. As time goes on, the nationalist feeling, which, carried on under the able leadership of the rebel Aguinaldo, maintained a dangerous revolutionary movement for years after the Americans took over, will find its level in local administration. To-day the heads of the cabinet are all Filipinos except the minister of instruction. This means greater commercial and industrial development, extending even to the races of the interior, who have not yet adapted themselves to the requirements of the normal social life of the islands.

A People Unregenerate in Spirit

There is indeed, without worrying about the "infieles" of the backwoods, plenty of room for improvement among the civilized Catholic Filipinos themselves. For all their traditions of Spanish descent, they are at heart real Malayo-Polynesians, unregenerate in spirit, unwilling to accept too readily the yoke of industrialism—a shyness which is probably not so bad a thing for them, although it tries the patience of the Western industrialist-in-a-hurry.

It will take more than an American board of directors to persuade even the factory hands of Manila to forgo their hereditary pastimes of gambling and cockfighting. The perfumed brown dandies and dainty little butterfly women who parade round the bandstand on the Luneta on Sunday evening, and fancy themselves the complete "caballero" and "doña," cannot be so easily broken into factory life, any more than their indolent contemporaries of the

shipping during the Great War stimulated the industry of expressing coconut oil, with the result that within two or three years thirty oil mills were working at full pressure, producing an annual yield of something like 100,000 tons, and creating an industry from negligible beginnings to an annual value of over six million pounds. By the end of 1918 close upon eleven thousand factories of all kinds had arisen in the islands, of which more than a thousand were in



Ewing Galloway

LEGASPI AT THE FOOT OF MOUNT MAYON'S PERFECT CONE

Luzón is the most northern of the Philippines and the greater part of its southern peninsula is occupied by irregular ranges of hills, mountains and isolated volcanoes. Mayon is a volcanic peak nearly 8,000 feet in height and in the nineteenth century it was frequently in eruption, almost completely destroying several villages that were situated at its base. Legaspi suffered

countryside will readily supply the strenuous demands of intensive agriculture as the stock exchanges understand it. Patience and care to an unlimited degree will be needed if the inhabitants of the Philippines are to be persuaded to win for commerce the immense wealth their land contains.

The extent of that wealth can be understood when it is said that the Philippines are the third most important coconut region in the whole world, and that as many as 367,000,000 cigars and 5,000,000,000 cigarettes have been produced in one year. The difficulties of

Manila alone. Industrial employees numbered 200,000—22,000 of them in Manila—and among the industries upon which they were engaged were saw-milling, embroidery, sugar, tobacco and the staple abaca, or hemp, the product which first made the name of Manila known all over the world.

Agriculturally, development under the invigorating American influence was even more remarkable. Production rose between 1910 and 1918 in the most remarkable and comprehensive fashion. The immense advance in the working of the cocoa and coffee crops is worthy of



W. Wimbledon Hill

COVERED BOATS AND A RAFT OF COCONUTS ON A CANAL IN MANILA

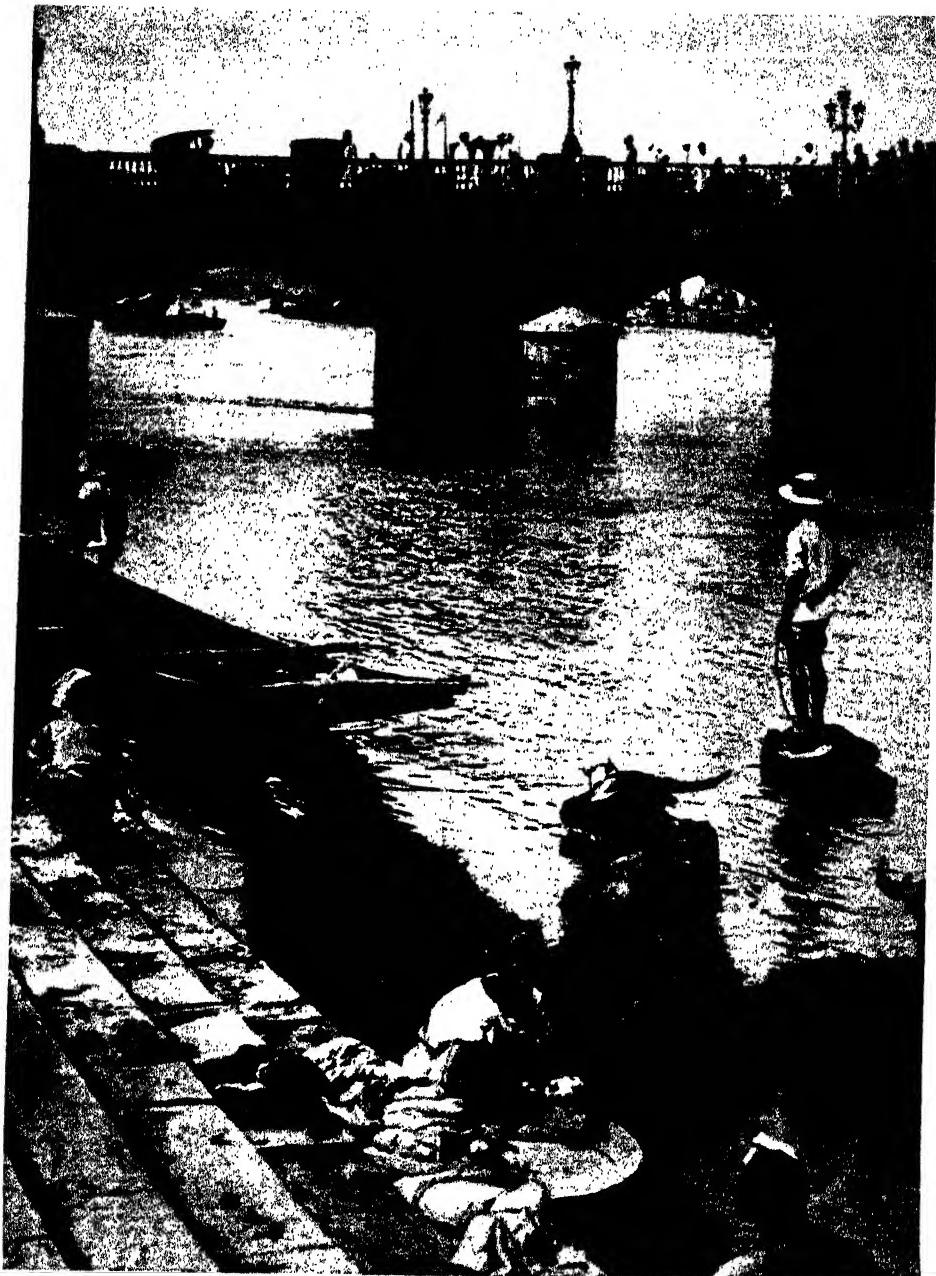
Unhusked coconuts are formed into great rafts in the interior and floated down to Manila to be exported. Many of the Filipinos live in boats upon the rivers; their homes are built of stout bamboo poles lashed together, and on this floating platform are constructed the living quarters of matting. A prominent feature of these craft is the huge rudder which is operated from a raised platform



Ewing Galloway

FILIPINOS CRUSHING SUGAR-CANE IN A PRIMITIVE MILL

Only about 12 per cent. of the total area of the Philippine Archipelago is cultivated land. Sugar-cane is numbered among the principal products and in 1922 the sugar-cane plantations covered an area of nearly 500,000 acres. Although many modern sugar-mills are found in the islands, in remote places the natives still work primitive machinery and above is seen one of their crude mills in operation



Underwood

ARCHES OF THE BRIDGE OF SPAIN OVER THE PASIG AT MANILA

South of the Pasig is the old city of Manila and to the north are the newer districts including that of Binondo, the principal shopping quarter lying at the northern end of the Bridge of Spain which replaced the Pontoon Bridge destroyed in the earthquake of 1862. Two steel cantilever bridges span the river above the Bridge of Spain. The city has suffered heavily from earthquakes and fires

special remark, seeing that the actual areas cultivated were less in 1918 than in 1910, while the value of the crops was over seven times as much. As a matter of solid fact, the Philippines produced

74 tons of cocoa and 85 tons of coffee in 1910, while in 1918 the figures were 566 tons and 721 tons respectively. And yet the quality of the coffee and cocoa has always been remarkably fine.

It would seem as if intelligent direction and careful attention to modern methods of agriculture can persuade even the indolent agriculturist of Luzón or Mindanao to put his back into his work and aim at a higher return in golden dollars with which to purchase the amenities of civilization, exemplified by the gramophone and the bicycle, and by articles of personal adornment much prized in circles where clothes, merely as a covering, are little regarded.

All over the Philippines, and particularly in and around Manila, development of road traffic has been remarkable. In 1908 there were not 250 miles of decent roads in the whole archipelago. Since then 6,200 miles of roads—1,500 of the first class, 1,300 of the second—have been constructed, and 2,000 miles fit for carts and beasts of burden in the dry season. With the introduction of the motor-car the roads from Manila to the neighbouring townships, such as Santa Aña, frequented largely by tourists it is

true, will compare for service with the finest highways of Great Britain.

It is significant that a certain type of American taxi-cab was in service in the Philippines for some time before it was introduced into London. Indeed, the Filipino is as quick to grasp the simple principles of motor mechanics as the Malay. His driving is somewhat on the adventurous side, but it is not nearly as dangerous or inefficient as it looks. The tendency at present is to develop the motor industry rather more quickly than the laying of road tracks would warrant. But that may be because the first involves less physical exertion than the second.

As for railways, it was not to be expected that much would be done by the Spaniards. But even the Americans have not progressed in this direction as well as might have been expected. The only railroads of importance are the Manila Railroad Company, of Luzón, and the Philippine Railroad Company in Cebú



Philippine Bureau of Science

GRASS-ROOFED DWELLINGS AMONG LUZON'S WELL-WOODED HEIGHTS

Nearly all the high ground in the mountain provinces of Northern Luzón, the largest island of the Philippine group, is wooded, and extensive forests of valuable timber, such as teak, ebony and sandal, occur; the indigenous flora being for the most part similar to the Malayan. The hardy tribesmen principally cultivate rice—on terraces—sugar-cane, tobacco, hemp and yams

and Panay. The first of these lines was acquired by the government of the islands from its British owners in 1917, after it had failed to complete satisfactorily the short line from the capital to Baguio, 150 miles away in the hills, the summer capital and headquarters of the military and police force.

The Luzón Railway before the Great War had a length of 517 miles, which has been increased to between 600 and 700 miles. The operations of the Philippine Railway Company began in 1910 with a short line of 60 miles, and its mileage is now doubled. But in view of the possibilities of the mining industry, which cannot conceivably be carried on to its full development without more railways, it would seem that

greater attention will have to be given in the future to the raising of capital for the extension of railroad facilities throughout the islands.

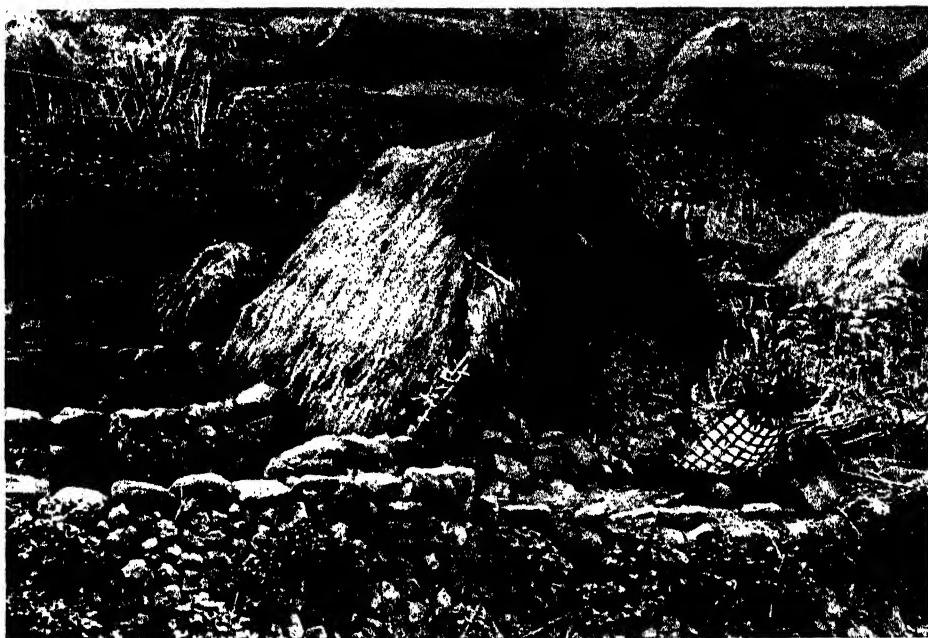
Coal has been found in great quantities. The iron deposits in the Surigao and Bukidnon provinces have proved to be of the greatest importance. In addition, there is gold, silver, copper, manganese, shale, petroleum, sulphur, asphalt, asbestos and extremely valuable deposits of potter's clay, marble and limestone, all of which are commodities badly needed by manufacturers in Europe and America.

It is quite impossible to leave the development of these resources even to the rapidly-advancing intelligence of the self-governing Filipino. He needs foreign



Ewing Galloway

BUFFALO DRAWING A HEAVILY LADEN WOODEN SLEDGE TO MARKET
In the Philippines the buffalo is much prized by the natives who are utterly incapable of managing a horse. The buffalo is employed for carting, ploughing and as a beast of burden; it is not capable of hard work for long periods, but is useful for labour where great strength is required for a short time. The flesh is relished by the Filipinos who dry it in the sun.



Philippine Bureau of Science

IGOROT SPINSTER HOUSE IN THE MOUNTAIN PROVINCE OF BONTOC

A remarkable amalgam of races peoples the Philippine Islands, and these races, intermarrying with Asiatics and Europeans, have produced a strange medley of types. In the northern regions of Luzón dwell the Igorots, a primitive people of Indonesian stock. In their villages, usually built on the hillsides in terrace fashion, special houses are built for unmarried men and women



W. Wimbledon Hill

ILONGOT HOUSE ON STILTS IN THE PROVINCE OF NUEVA VISCAYA

Inhabiting the province of Nueva Viscaya on the island of Luzón are the Ilongots who build their houses on stout tree-trunks to ensure security from intruders, both human and animal. The roof is of nipa grass and the walls of bamboo lattice-work. The only means of ingress is by mounting a log, such as the one shown, on which steps have been roughly hacked

capital and foreign direction to stimulate his energies, and foreign railways to show him how simple a thing it is, after all, to take the gifts of nature from her ample lap and distribute them for the enjoyment of mankind.

And there is room for further development of passenger and goods traffic in steamships between the islands. The important towns, numbering at least a dozen, are too far apart. Manila, now a city of more than a quarter of a million people, is in easier communication with Yokohama and Hong Kong and Sydney than with Iloilo, the prosperous capital of Panay, or the rising cities of Ormoc and Baybay, in the island of Leyte. There is much that needs to be done in the way of commercial interchange between the islands; for although to the Caucasian there may not be much difference between the Visayas of Mindanao and the Tagalog of Luzón, in reality there are almost as many clear racial and linguistic divisions to be distinguished in the archipelago as there are in Europe itself.

As for the white man, his commercial prospects are excellent in the Philippines, despite the somewhat unwise tendency of Washington towards too much maternal legislation and pampering of the native races. It is the Americans themselves who suffer most from the spoilt conceit of the Filipino townsman. The British and other white

traders are not constrained by any fear of pious governmental intervention from maintaining their prestige, and incidents irritating to American sensibilities rarely trouble their colleagues of European origin.

However, when the Filipino has found himself, he will no doubt be more appreciative of American progress than he is at present. Picturesque, gay and high-spirited, progressive despite a natural inclination for the comforts of indolence, he has the makings of a good citizen, and the tactful appeal to his much-valued Occidental culture never fails to find a response. The obvious evidence of progress all round, instituted and developed by the American rulers whose good work he takes so much for granted, cannot fail ere long to win the confidence of the Philippine Islander.

And when the Filipino of the city finds that it is American influence which is bringing him into friendly and useful contact with his kinsmen in the villages of Luzón and throughout the neighbouring islands, when he sees more clearly in the debates of the newly-constituted senate and house of representatives how great his own opportunities are for the development of good government on lines of modified independence, there is every hope that what might be called the United States of the Philippines will eventually take a notable place in the councils of civilization.

PHILIPPINE ISLANDS: GEOGRAPHICAL SUMMARY

Natural Division. One of the familiar island festoons of the Pacific Ocean, connecting Borneo with Formosa. The un-submerged tops of ancient fold-mountains, with a few of the intervening gaps filled with alluvium to make flat valley floors. Part of the edge of the ancient continent of Angaraland. Volcanic, visited by earthquakes. (Cf. Japan.)

Climate and Vegetation. Tropical heat, rainfall and jungle forest. (Cf. West Indies, Bornco.) The narrow islands and the relative excess of elevated land modify the temperature. Rain splashes are destructive of public works.

Products. Forest products, rattans, dye-woods, await exploitation with conservation. Coal and other minerals await

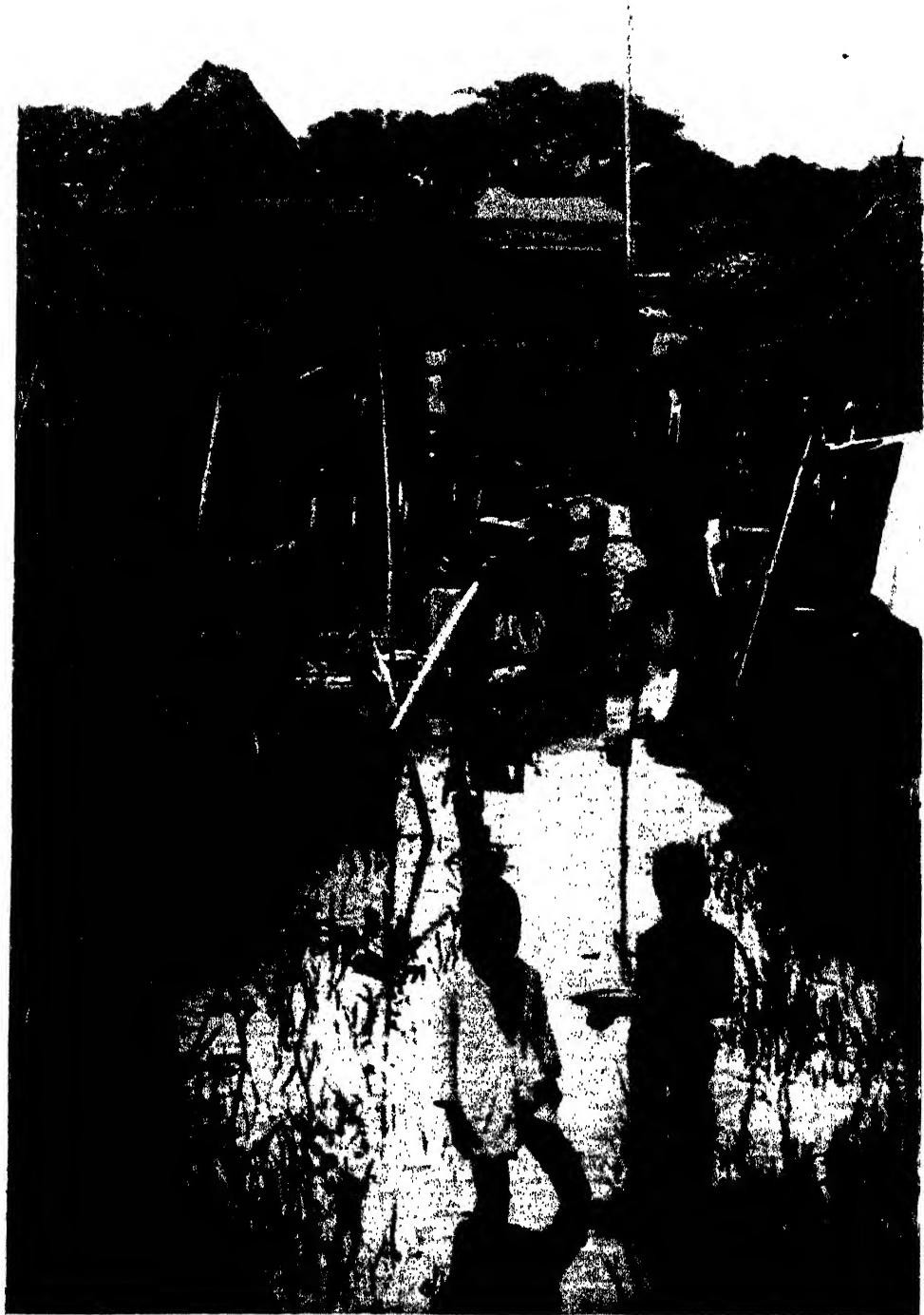
transport facilities. Copra, coir, coconut oil, cane-sugar, rice, coffee, cocoa, fruit. (Cf. Java.)

Communications. Overseas ships maintain steady connexions. Coasting and local services are inadequate. Railways are few. Roads and tracks have been constructed but need extension. (Cf. Sumatra.)

Outlook. The Filipino has been neglected by Spain and is being constrained and tutored by the United States, which is solving the problem of tropical colonies along lines which have been successful in Panama and Java. Wealth is in the archipelago awaiting patient and careful extraction from soil and rock.

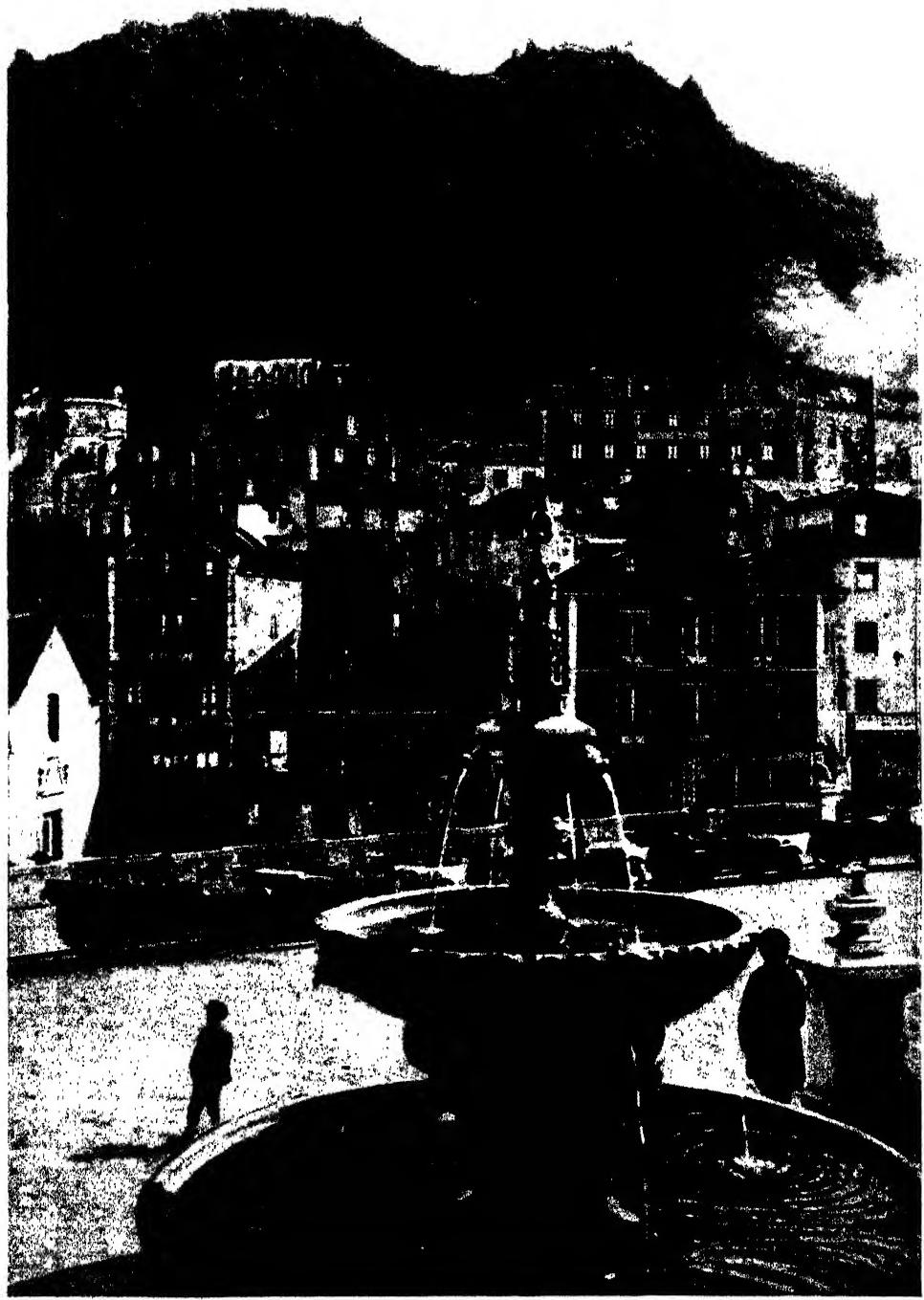


PHILIPPINE ISLANDS. On Mindanao material for building the native houses grows on every hand in the groves of towering bamboos.



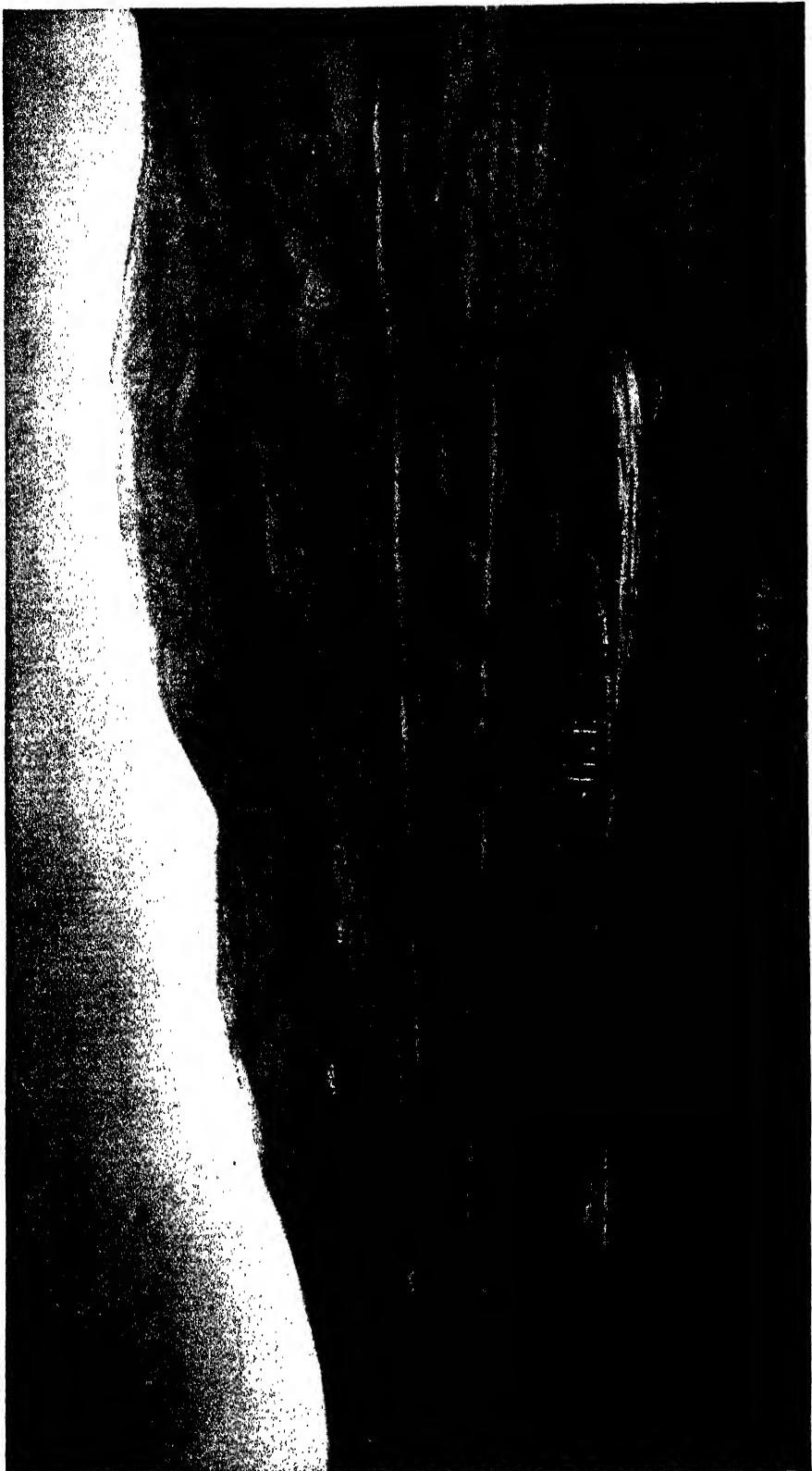
Underwood

PHILIPPINE ISLANDS. Piles raise these houses near Manila out of the stagnant water which is a breeding-ground for mosquitoes



G. Long

PORUGAL. From the irregular crest of a rocky crag the ruined Castle of the Moors seems to overhang the very heart of Cintra



PORTUGAL. These curious flat-bottomed boats, some with enormous rudders, are specially built to carry cargoes of the famous wine of the valley through the treacherous reefs and rapids of the Douro down to Oporto.

E. A. Waymark

P. L. M.
PROVENCE. At Fontaine-de-l'Ause, whither Petrarch retired in 1337, the Sorgue gushes forth from a titanic basin in a hill, and washes the foot of a rocky wall upon which stand the ruins of the Château





PUNJAB. The setting sun casts long shadows of the hills as they lurch down the track which winds among desolate hills and sandy wastes spread out before the wild Sulaiman mountains in South Waziristan

PUNJAB. Bahawalpur stands upon the Sutlej, one of the five rivers of the Punjab, and these thomy high-sterned boats carry on the river trade. The vast desert of Bikaner stretches away for leagues behind the town





PUNJAB. In the centre of the Pool of Nectar at Amritsar there glistens the Golden Temple, a lovely building all of gilded copper save for silver doors and the white marble which forms the lower portion of its walls

E. Conder

POLAND

The Key to Eastern Europe

by Florence Farmborough, F.R.G.S.

Traveller and Writer on Central Europe

POLAND, like many another autonomous state in Europe, owes her independence to the Great War. The defeat of the Central Powers and the disintegration of the Russian Empire brought about her liberation after some 150 years of bondage under the crushing tyranny of her three neighbours—Russia, Prussia and Austria.

With almost twice the amount of her present territory, Poland was a great power until the middle of the eighteenth century when her fortunes rapidly declined. An irresponsible and a selfish nobility, with a policy of aggression both at home and abroad, and a down-trodden and discontented peasantry, constituted the decadent nation. There was no middle class; its development was repressed by the haughty nobles who feared lest a third class should form a "connecting rod" between themselves and the despised peasantry.

Decline and Resurrection

The downfall of Poland was inevitable. The first partition took place in 1772, the second in 1793, and with the defeat of the great patriot, Kosciuszko, at Maciejowice in October, 1794, Poland's last hope vanished. The third and final partition came in 1795. Austria held the province of Galicia, the province of Posen passed to Prussia, and Russia took the remainder—the lion's share.

During the long period of captivity the Poles steadfastly refused to believe that the partition was anything but a temporary condition. Despite a wide diversity in conditions prevailing under the three partitioning powers, Polish political and social parties never ceased

to cooperate. Significant was the remark made last century by the Polish noble, Koscielski, to the effect that "red lines on a map could not create divisions of the Polish nation." In 1918 the first Polish national government under General Pilsudski was formed. Then Poland, a country with a great historical past, full of romance, glamour and opulence, began to live again, and the Polish people, their national entity intact, were at liberty to develop their own political, intellectual and social life.

Open and Defenceless Frontiers

The republic is bounded on the north by the Baltic Sea, the Free City of Danzig, East Prussia and Lithuania; on the east by Russia and the Ukraine; on the south by Czechoslovakia and Rumania, and on the west by Germany. The total area, including Russian Poland, Posen, Upper Silesia, East Galicia and the Vilna territory, is 149,359 square miles, and the population is estimated at 27,192,600.

The surface of the country is generally uniform, with a lower average altitude than most European countries. The frontiers east and west suffer the disadvantage of lying open and almost defenceless, and except on the south, where the Eastern and Western Beskids of the Carpathian range form a well-defined barrier, there are no natural protective boundaries.

According to its geological formation Poland may be divided into four regions: the mountainous districts of the south, the southern plateaux, the central plains, and the northern region of marshlands, lakes and barren hills. Topographically, both Russian and



HISTORIC PASSAGEWAY BETWEEN WESTERN AND EASTERN EUROPE

Prussian Poland form part of the great plain of northern central Europe; both soil and surface were determined by the movements of the great Scandinavian ice-sheet during the Ice Age, and the silt of the glacial lakes has made the land extremely fertile.

Traversing the country from east to west, and crossing the rivers which flow chiefly north and south, are two distinct depressions, which allow easy entrance into Poland and justify the importance formerly attached to the fortresses of Grodno, Brest-Litovsk and Thorn. The section of the great European plain which

lies within the frontiers is cut up by the river Vistula into two portions; that on the right bank being decidedly less fertile than that on the left where modern methods of cultivation have improved a soil already naturally rich.

The transition from the oceanic climate which obtains in Western Europe to the continental climate of Russia is perceptible in Poland, whose climate is a climate apart, being neither so severe as that of Russia nor so temperate as that of Central and West Europe. In Galicia, however, a severe climate is experienced, for the land lies exposed to the north.

and north-east winds, the Carpathian mountains shutting off the warm winds from the south. Hence the considerable contrast in temperature noted at Lemberg, where the mean January temperature is 24° F. whereas that of July is as high as 66°.

The annual rainfall in the plains ranges from 17½ to 23½ inches; on the plateaux in the south the average is much higher. Of the winter precipitation about half falls in snow, which, however, rarely lies longer than March. The period of thaw comes with great suddenness, and roads are frequently rendered impassable by river

flooding and by an incredible accumulation of sticky mud.

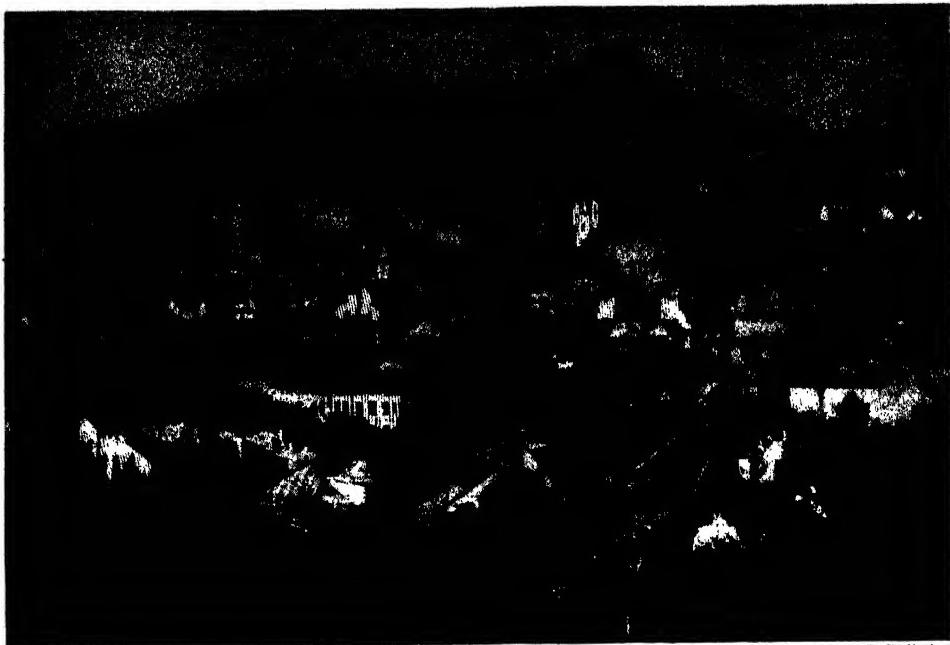
The means of communication in Poland are far from being satisfactory. Russian Poland has indeed several first-class roads, originally made to serve strategic rather than economic ends; but the greater number of the so-called roads are mere soil tracks. As may be understood, the motor-car industry is still at a rudimentary stage, but the Poles are eager for cars, and when the real roads come the cars will not be far behind. As a proof of this eagerness, the Ford Motor Company received from the industrial town of Bydgoszcz



Florence Farmborough

UNIAT CHURCH IN THE GALICIAN VILLAGE OF SOLOTWINA

Poland's population of over 27,000,000 includes several races and creeds. Many Ruthenians, or Ukrainians, belong to the Uniat or United Catholic Church, whose priests, although acknowledging the Pope's supremacy, retain their own rites, liturgy and Slavonic language. The churches are usually built of wood and in quaint forms that show Byzantine influence in certain features



J. Bulhak

LEMBERG, A PICTURESQUE GALICIAN TOWN AMID ITS WOODED HILLS

'Beautifully situated in its pleasant valley, hedged in by low, richly-wooded ridges of the Carpathian range, is Lemberg, an important town on the eastern trade route from Cracow to Kiev with railway lines radiating to many great cities. Founded in the thirteenth century, it has long been noted as a centre of learning and has a fine university, an extensive library and numerous educational institutions.



J. Bulhak

CRACOW, THE FAMOUS OLD POLISH CITY ON THE UPPER VISTULA

Once the capital of all Poland and one of Europe's greatest cities, Cracow still holds prestige as a centre of Polish science and art, while the ancient university, dating from 1364, again leads the way in all branches of learning. To the right is S. Mary's Church, founded in 1226, and the high tower, rising behind the old Cloth Hall in the market square, is a relic of a fifteenth century town-hall.



E. N. A.

RAILWAY AND FOOT BRIDGE OVER THE VISTULA AT DIRSCHAU

Dirschau, a flourishing Polish town, formerly in the German province of West Prussia, is situated on the Vistula about 20 miles south-east of Danzig. It has large railway shops and several important industries including the manufacture of sugar and agricultural implements. Its iron railway bridge—the section seen on the right is reserved for pedestrians—is noted for its lattice work, archways and turrets



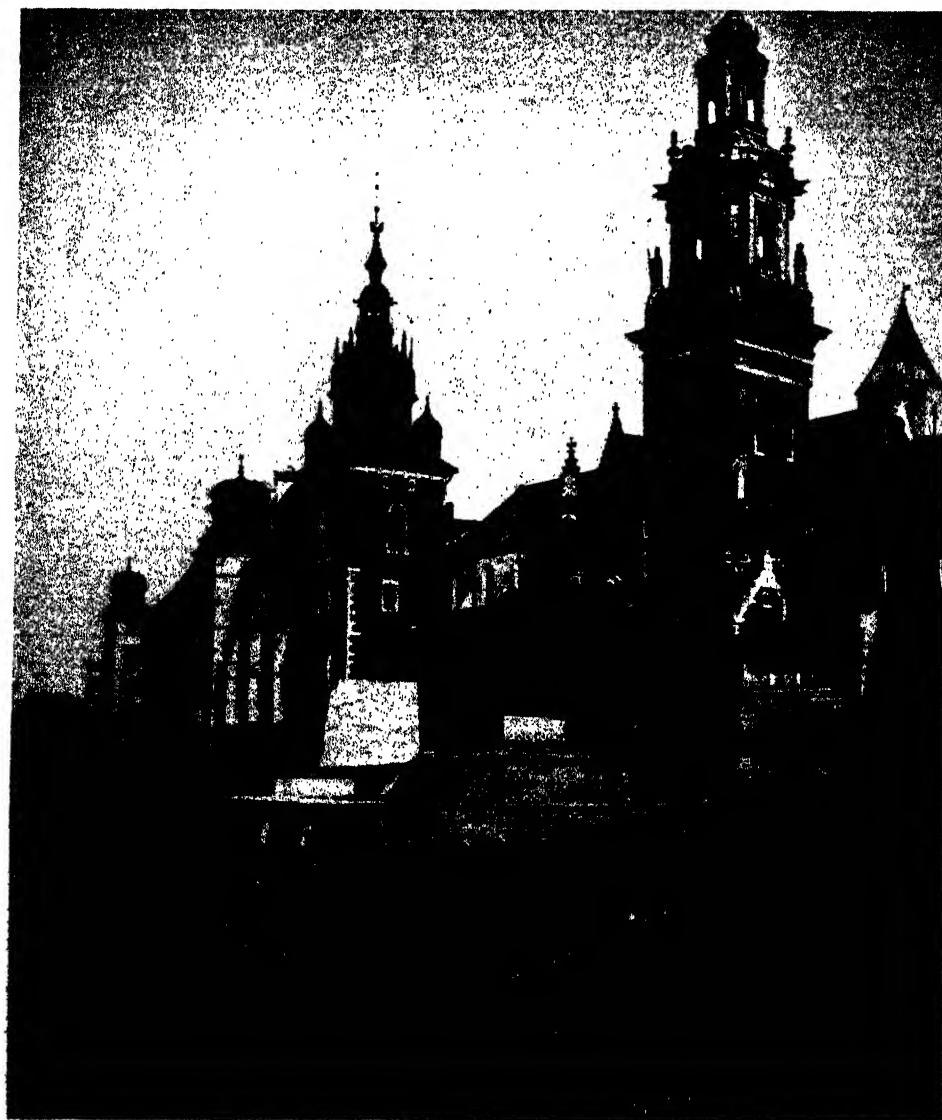
J. Butak

S. HELENA GUARDS THE CROSS OF AN ANCIENT VILNA CATHEDRAL

Many beautiful old buildings adorn the irregular though picturesque city of Vilna, situated in north-east Poland at the confluence of the Vilelka and Vilia. This pediment, containing a group of the sacrifice of Noah and surmounted by statues of S. Helena and SS. Stanislaus and Casimir, belongs to the fourteenth century Roman Catholic Cathedral of S. Stanislaus. Beyond, the Vilia flows by the castle hill

(Bromberg) the offer of a free site for building a factory. Bridges, too, stand in need of considerable attention; even the Polish proverb derides them: "A Polish bridge, A German Lenten fast, An Italian Church service. All these are humbug." The activities of the Polish aviation companies are, however, progressing favourably, and an aerial service has been established with several European cities.

With regard to railways, Poland, compared with other European countries, is somewhat backward, but by June, 1923, there were 10,312 miles of state-owned railroad suitable for traffic. The country is well watered, with over 1,800 miles of navigable waterway, but the Warta, the Dniester and the Niemen are the only rivers of any size not tributaries of the Vistula. The Vistula is Poland's greatest waterway; its



ROYAL CATHEDRAL AND CASTLE IN POLAND'S ANCIENT CAPITAL

The Wawel is the Acropolis of Cracow. Here the Polish kings resided, were crowned and buried. Founded in the fourteenth century, destructive forces have caused much devastation, but several large separate buildings remain, including the Gothic cathedral which enshrines the tombs of the kings and national heroes. This historic pile stands on the Wawel hill, in south-western Cracow.

Polish Legation



Polish Legation

FINE SPECIMEN OF MEDIEVAL ARCHITECTURE IN HISTORIC THORN

Thorn, or Torun, famous as a fortress town and the birthplace of Copernicus, lies on the right bank of the Vistula in north-west Poland, 90 miles south of Danzig. It was founded in 1213 by the Teutonic Order, and acquired great prosperity as a Hanseatic town. The town-hall with a handsome tower ranks first among its interesting old buildings and dates from the thirteenth century.

entire course of 620 miles is almost wholly within Polish territory. Usually frozen from December to March, it averages only from 240 to 290 navigable days per annum, and like other

Polish rivers floods extensively in spring and summer and causes an incalculable amount of damage, sweeping away the banks and creating bars large enough to suspend all river traffic.

The fresh-water fisheries are of much value; the Vistula, the Niemen and their tributaries contain abundant life, which, however, has been unnecessarily depleted owing to inefficient control.

Reforms in Favour of Farming

The Poles have always been an agricultural people, and 65 per cent. of the population still derive their subsistence from the land. Of the total area 48.5 per cent. is arable land, 17.2 per cent. pasture and grazing land and 24.4 per cent. forest. The rural population, though for the most part backward and undeveloped, plays an important rôle in the national life. Many of the peasants are prosperous, and recent agrarian reforms, whereby large estates were expropriated in favour of the smaller landowners, are bringing them more and more to the front. And agriculture is improving; cereal crops not only cover local requirements, but furnish a surplus for export. A wide stretch of wheat-bearing land extends from Warsaw to the rich black-earth belt in Podolia. Hay meadows are everywhere plentiful, and among cereals the principal crops are rye, oats, wheat, barley, buckwheat and millet.

Industries Dependent on Agriculture

In striking contrast to the methods of agriculture employed in Poznania, where the Germans, with Teutonic thoroughness, introduced a scientific system of intensive farming, primitive methods are still current in parts of Galicia. In the neighbourhood of Cracow is found the most highly cultivated area, but flax, hemp and tobacco are grown on a fairly large scale, even by the small Ruthenian landholders, and clover, hay, maize, poppies and pumpkins are other general field crops.

Among Poland's industries textiles, mining and metallurgy occupy the principal place, followed by timber and leather. Several industries are dependent upon local agriculture, namely: alcohol on the potato crop, and sugar on the beet crop; the export of sugar

for the year 1924 amounted to over 150,000 tons, and this figure almost doubled itself in 1925. Then there is the brewing industry contingent on the hop harvest of the Vistula valley.

The mineral resources have been given little systematic study, but it is probable that scientific research will bring to light many hidden stores of wealth. The richest part of Poland is undoubtedly in Upper Silesia and in the highlands of the Cracow district. Here are extensive beds of coal and considerable deposits of iron and zinc ore. Lignite coal is found in several districts, also cadmium, lead, silver and copper ore. Limestone is quarried for structural purposes and cement-making is steadily becoming an established industry.

Wealth of Mineral Resources

Galicia is remarkably rich in minerals, of which petroleum and salt are the most valuable. In 1909 a maximum oil production was reached in the 2,076,000 tons of crude oil brought to the surface. The Galician oil-fields still give satisfactory results and a great promise for the future, especially those in the districts of Boryslaw and Bitkow, the richest fields of the petroleum industry, but more capital is required to meet the increasing cost in equipment, which was responsible for a serious falling off of the output in 1923. At several points in the Polish oil belt, the mineral wax known as ozokerite is worked. The vast rock-salt mines of Wieliczka and Bochnia near Cracow have been famous since the twelfth century; those at Wieliczka are enormous, and contain, it is estimated, over 20,000,000 tons of salt, while the immense underground salt city, splendidly decorated and equipped, is one of the show-places of the Continent.

Poland has great forest wealth. Pine woods are scattered about the centre of the country, and forests of oak, beech and lime cover the foothills of the Carpathians. Several coniferous trees, including pine and spruce, are plentiful



Polish Legation

ONE OF LEMBERG'S NUMEROUS ECCLESIASTICAL BUILDINGS

As the archiepiscopal see of the Roman Catholic, Armenian and Greek Orthodox Churches, Lemberg, known in Polish as Lwów, contains three fine cathedrals, apart from several handsome churches. The Dominican Church, seen above, is a massive domed building dating from the eighteenth century.

The university, the town-hall and the theatre are noteworthy secular buildings

in the north and north-east ; aspen, elm, birch and hornbeam are generally distributed.

The forests of Poland, so exquisitely described in "Pan Tadeusz" by that ardent lover of nature, Adam Mickiewicz, are clothed with supreme natural beauty. Seeing them for the first time one is struck with the amazing height of the trees, both deciduous and coniferous —mighty oaks mellow with age-old

memories, and soaring pines of wondrous form. Many of these giants reach a height of well over 100 feet. Travelling on foot once across Poland from Gorlice to Grodno, the writer passed many days and nights under a continuous canopy of trees of unparalleled luxuriant growth. All the old favourites were there : oak, ash, elm, alder, birch, poplar and lime, but the conifers—pine redwood and pine whitewood—were a source of

unceasing surprise and delight, and "so perfumed that the winds were love-sick with them." Indeed the air in those primeval woodlands was delicious, clean and fragrant beyond description, the health-giving breath of the virile forest which for centuries had been free from destructive forces, save those of nature in her wayward moods.

State Control of the Forests

In innumerable forests, however, indiscriminate felling has always been the rule, and many have been recklessly denuded of their wealth without a thought to reafforestation. The system of exploitation is now state-controlled, for timber is one of Poland's most valuable possessions, and during 1924 British commercial enterprise secured a ten years' concession for the exploitation of four vast state forests, with the right to fell 25,000,000 cubic feet of timber yearly. One of the four, the forest of Bialowieza, situated between Brest-Litovsk and Bialystok, has an area of about 360,000 acres. Said to be one of the few remaining primeval forests of Europe, it was formerly the hunting ground of the Polish kings, and the Tsars of Russia, in their turn, preserved the animal and bird life exclusively for royal patronage.

Last Refuge of the Bison

To this day that last surviving monarch of the old European forests, the bison, proudly tramps the glades. But his days are numbered. Scarcely five score remain of that mighty herd which provided the "big game" so eagerly coveted by courtier and commoner. Deer and boar are still numerous, especially in the wild Carpathian forests, where is the habitat of the wolf, whom hunger occasionally urges to commit depredations in the mountain villages, to the terror of the Ruthenian peasantry. The lynx, beaver and many other wild animals are found, and bird-life is exceedingly prolific.

Throughout the republic considerable attention is given to live stock. Serious

inroads were made upon both quality and quantity during the Great War, but many of the districts have been able to replenish their supply. Dairy and poultry farming are also progressing; the pig is a favourite domestic animal of the small-holder, particularly in East Galicia, where he is a household pet, often ranking higher than the dog in the family affections. Here, too, bee-keeping constitutes an important industry, the honey being noted for its fine aroma, due, perhaps, to its origin in the exuberant Carpathian flora.

In a Carpathian Garden

Wild flowers are spread lavishly about the lands of the Carpathian system; the meadows and valleys stand thick with them; they cluster in the woodlands, close neighbours, in the season, of that scented fruit, the wild strawberry, one of the most delicious of Galicia's ubiquitous berries; they nestle among the foothills, the more intrepid climb the slopes and mix with the alpine flora, among which one may catch a glimpse of the vivid blue of the gentian, or the woolly whiteness of the shy edelweiss. The alpine region of Poland is centred in the High Tatra mountains, where the sanatoria of Zakopane, its picturesque highlanders and the spectacular grandeur of its surroundings attract visitors from many foreign countries.

Although a Slavonic people, the Poles received their creed and culture from the West. Roman Catholicism, and not the Greek Orthodox faith, is the dominant religion, but there is no State Church, and all sects enjoy equal consideration. A gifted nation, their contribution to the arts and science of Europe is of singular distinction, and their roll of famous names includes numerous poets, painters, writers, musicians, and men and women of science. Owing to the continual suppression of all their activities by the Imperial Russian administration, the Poles were deprived of many natural advantages. Polish workmen were more



Florence Farmborough

JAREMCZE, A BEAUTY SPOT IN THE WOODED CARPATHIANS

The Carpathian chain extends from the Moravian gap in a south-easterly direction along the southern frontier of Poland to the Rumanian plain. Magnificent scenery is found in this mountain barrier, pasture lands, forest clad slopes and crests, and barren precipitous peaks capped with eternal snow; and, abounding in mineral wealth, it affords interest alike to the geologist and the lover of nature.



Florence Farmborough

DERRICKS ON THE PROLIFIC OIL-FIELD OF BITKOW, EAST GALICIA

Petroleum ranks next to coal as Poland's most important mineral product, and Boryslaw-Tustanowice and Bitkow, in East Galicia, are the richest fields of the industry. The derrick is a tower-like structure erected on the site of the proposed well, which is drilled by powerful machinery, the petroleum being conveyed to the surface, sometimes from a depth of nearly 5,000 feet, through iron or steel casing.

skillful, more energetic, and consequently more productive than Russian, but commercial and educational enterprise was not only discouraged, but penalised; in fact, organizations of any kind were looked upon with suspicion as a possible cloak to cover the pursuance of some political aim.

Semitic Domination in Trade

Each of the three divisions of Poland was forced to lead a different economic existence, and each was exploited by totally different methods. Small wonder, therefore, that when these three divisions became reunited the foundations of a national economic life were wanting. Moreover, during the Great War the whole land had been subjected to devastation by fire and sword. To reinstate a normal industrial life was no easy task. The Jews, too, had gained control over much of the trade. They were very numerous, for ever since the days, especially in the last century, when the Russian ukase had driven them out of the heart of Russia, the immigration into Poland, where they found comparative security from persecution, had been continuous.

Problem of National Minorities

They settled down chiefly in and about Warsaw and Piotrków, everywhere where they found scope for commercial enterprise. In country places the peasantry came under their influence, and local trade in agricultural commodities became practically a monopoly of the Jews. The Jewish question is an all-absorbing one, but it is only part of the great political problem of national minorities, a problem which, though working its way towards the light, still awaits a definite solution.

The Ruthenians, or, as they now call themselves, Ukrainians, are the largest national minority and number about 5,000,000. There are some 2,500,000 Jews and 1,500,000 White Russians. The Germans number 600,000 and the Lithuanians only about 40,000. Much adverse criticism has been heard

concerning Poland's "intolerance" towards the minorities, but whatever misdirected policy there may have been in the past, it is certain that steps are now being taken to redress grievances, particularly where national education is concerned. For example, before the Great War, Volhynia, in south-east Poland, had no Ruthenian schools; since the restoration of the Polish state no fewer than 429 Ruthenian primary schools have been opened. The general aspect of the country is unquestionably promising, but many towns in the north and east, such as Vilna, Grodno, Pinsk, Kovel, Rovno, are still suffering the throes of war's aftermath.

Rapid Growth of the Towns

The growth of Polish towns has in some instances been amazingly rapid. Lodz, the chief centre for the manufacture of woollen and cotton goods, was at the beginning of the nineteenth century a village of some 200 inhabitants. In 1829 the first factory was built; in 1921 the town had 452,079 inhabitants. Warsaw, the capital of the republic, furnishes another striking instance, but its story will be given later in a separate chapter. As towns whose growth has depended upon their industrial development, mention may be made of Cracow, the ancient capital of Poland, with 181,700 inhabitants; Posen, 169,800; Czenstochowa, 80,500; Sosnowiec, 86,500; Bydgoszcz, 87,800.

With this industrial expansion a third class, usually referred to as the proletariat, made its appearance, and about the year 1880 the Workmen's Movement had its origin in Lemberg, in Austrian Poland, where, it must be remembered, the Poles enjoyed a certain kind of autonomy. It was at Lemberg, too, that the first public strike of the Poles took place. Now Poland has experiences of her own in strikes. In July, 1924, 30,000 workers in iron and steel foundries struck against the ten-hour working day, a general strike following on August 1; while in the Lodz textile strike of November,

1924, some 60,000 workmen were involved. These difficulties, though happily settled in the long run, impede economic progress and reconstruction ; and further, Poland, like most European countries, has to contend with the Communist element which never relaxes in its endeavours to incite revolutionary trouble.

Poland has faced many serious situations since the recovery of her independence, but few so adverse as the

and, with vigilance and forethought, Poland should attain a position of economic independence in Europe.

The peril of the republic's geographical position is apparent with a single glance at the map. On the east, an inconveniently long frontier, lies Soviet Russia ; on the west Germany. Poland is the recognized "political barrier" that separates the East from the West, and long ago Soviet Russia appreciated the fact that if Bolshevik principles



Donald McLeish

BROAD, WELL-KEPT THOROUGHFARE OF POSEN'S MODERN QUARTER

One of the most ancient Polish towns, Posen, or Poznan, as it is now called, was the residence of the rulers of Poland until 1296. It lies on the Warta and owing to its strategic situation became during the period of German administration an important frontier fortress ; it has now many flourishing manufactures and an extensive trade. On the left is seen the columned façade of the New Theatre

rapid deterioration of her financial position, which, towards the end of 1923, resulted in a general depression in the economic life of the country. Bracing themselves for the struggle, the Polish government determined to bring about financial stability, and at their invitation a British financial mission undertook to investigate the finances of the country and to advise the introduction of measures likely to improve the strained situation. The mission proved a great success ; a sound financial policy was forthwith adopted,

were to be established in Central Europe this land would have to be traversed as the "short cut." And as the key to Eastern Europe Poland's position must not be underrated.

Poland is richly endowed by nature and has excellent prospects. The land has natural wealth, well-organized and developed industries ; the people are hard-working and skilful. The national debt is insignificant and no reparations are owing, and the energetic efforts of M. Grabski, the Prime Minister, have resulted in the introduction of a new

coinage and a stable currency. For the first time the Polish government balanced the Budget in the financial year for 1924. Moreover, Poland has led the way in Europe by discharging her national debts. Thus, on the last day of December, 1924, her debt to Great Britain was paid, and several other countries have likewise received payment for loans or help granted; the "dettes de secours," as Poland terms them, being given precedence.

Poland is making the most of the small portion of Baltic sea-board allotted to her, and although Danzig is partly under her control and may be regarded as her chief seaport, a new port and naval base are already in course of construction at Gdynia, a fishing village about an hour and a half's journey from Danzig. The work is being carried on energetically and will be completed about 1927; the port will be even larger than Danzig and will furnish Poland with her greatest need—a free outlet to the sea. The quaint little village already realizes the important position it will one day occupy and has begun to assume the aspect of a flourishing watering-place, with handsome new

villas and modern hotels adding to the air of prosperity.

Undoubtedly, Poland has achieved great things. In a destitute position, possessing neither money nor credit, she nevertheless cheerfully shouldered her national burdens. The ravages of war, once widespread throughout the country, have been almost obliterated. Some seven hundred railway bridges alone, many of them severely damaged, have been restored. Lack of administration and business experience proved, during the first few years of independence, a decided obstacle to progress, but the year 1925 dawned with several strong men at the helm of Poland's political ship and the future is full of hope.

It is a brave new world that is slowly regaining the confidence of Europe. The awakening nation has already proved its vitality. The Poles are a dynamic power in New Europe; they are framing to become a more stable people, sounder in government and in general policy. The firmer their foothold on the Continent, the stronger the unity of the European peoples. The consolidation of New Poland is the consolidation of New Europe.

POLAND: GEOGRAPHICAL SUMMARY

Natural Division. Section of the great European Plain between the Carpathian Mountains and the Baltic Sea. (Cf. Germany, North.) Glacial debris spread over the plains with morainic hills. The east-west valleys are wide, flat-floored valleys carved by great rivers of the glacial period; the present streams, Netze, Warta, etc., are misfits.

Climate. Transitional region between the oceanic climate of Western Europe and the continental climate of Central Russia. The actual winter weather is controlled by the extent to which the oceanic westerly winds penetrate the country. As in North Germany the climate of the southern zone is colder because of the increased elevation of the Carpathian Highlands. Spring and autumn are short seasons, with rapid changes of temperature.

Vegetation. Naturally a forest land (cf. Central Russia and prehistoric Germany), the land is partly cleared and is mixed wood-land and grass-land, with less grass and more forest than in England.

Products. Wheat shows a surplus; rye, oats, barley, are other cereal crops; flax,

hemp, tobacco, clover and maize are also grown. Coal, iron ore, zinc ore, salt, petroleum; timber; pigs; textiles.

Communications. Warsaw is the centre of a steadily improving system of railways and roads. Gdynia is the Polish outport of the Danzig corridor, a national port being created in opposition to its international neighbour Danzig (Gdansk).

Outlook. The Poles of the present generation are novices in self-government. The middle-class is a new growth and is small numerically. Among the Poles are minorities of Germans, Lithuanians, White Russians and Ruthenians, and the largest proportion of Jews, who are mainly town dwellers, of any country in Europe. Most of the mineral industries are under Polish supervision for the first time. All these divergent elements, more or less foreign to a people who are by tradition land holders or land tillers, are yet to be welded into a united state which can then make headway commercially and can effectively control their country, the historic passageway between Central and Eastern Europe.

PORUGAL

Old Land of Pioneer Adventurers

by Henry Leach

Author of "Spanish Sketches," etc.

HERE on an oblong strip of land, looking towards the new world across the sea, is the hearth and home of a people who have been in league with Great Britain longer than any other, a people who in some respects have been developed on the same temperamental plan.

In olden days they scoured the East. They fastened on India and threw Bombay into a basket of marriage gifts that went with a Portuguese princess as she wedded a Stuart king.

They established themselves on the coast of Morocco; their old fortifications at Mazagan, Mogador and elsewhere are wonders still. Now, as is the way with history, only a shred or two of that old greater Portugal remains, the best of it being in Africa.

In those golden days Vasco da Gama—who did something great for geography—made far discoveries, and Camoens, the supreme national poet—who may be said to have registered and fixed the language that came from the Spanish Galician dialect—sang in noble epics of the fame of Portugal.

A Fifth of the Iberian Peninsula

Portugal seems so small: there are only 35,000 square miles of it. How from this item arose the greater Portugal? The country has for the most part a sweet climate under which a people might be expected to thrive. It is just a rectangular patch of the Iberian peninsula, of which it makes a fifth, with no pronounced physical division from the rest.

With no great walls of mountains, no wide rivers, and no strong racial difference to separate it from the rest of the peninsula, Portugal has had to

struggle to assert its individuality, and in that it has made itself more Portugal. And then from its 500 miles of coast it gazes across the Atlantic, and in that gaze, its old Brazil being filmed in its imagination, there is always inspiration. Such are the causes of Portugal.

Triple Division by Three Rivers

This country is mildly hilly, with extensive parts of flatness. All its mountains and nearly all its rivers are taken second-hand from Spain, though they only become navigable in Portugal. Here towards the coast the Spanish mountain ranges peter out in hardly impressive points.

The Douro and the Tagus are the two chief rivers, one in the north with Oporto at its mouth and the other in the south, that wild, meandering, romantic Tagus that rises on the farther side of Spain and wanders through the heart of Castile, touching no big city except ancient Toledo until, after its tortuous adventures, it flows wide and calm by Lisbon.

These two rivers heading straight across Portugal mark it out into three divisions, each of which has acquired some character of its own. North of the Douro is the hilliest section of the country, separated from Spain on the northern frontier by the river Minho, and this part is liberally sprinkled with minor mountain ranges that are like an overflow from the Cantabrian chain, the western end of which bends down through Galicia and exhausts itself here in similar territory only separated from that Spanish province by the river Minho, thus emphasising the integrity of the peninsula as a whole.



PORTUGAL'S SHARE OF THE IBERIAN PLATEAU

Then in the most southern of the three sections of the country there are two small ranges bearing the names of Guadaloup and Monchique, the latter marking off a strip of country at the extreme south called Algarve. This was once an ancient Moorish kingdom,

and the present inhabitants, happy in a climate that is delicious in winter and spring, are in many respects a people to themselves.

Down here on the eastern border runs the river Guadiana, which also comes along from Spain, and, after winding itself about the north of Andalusia, here shuts off that fairest of Spanish provinces from Portugal.

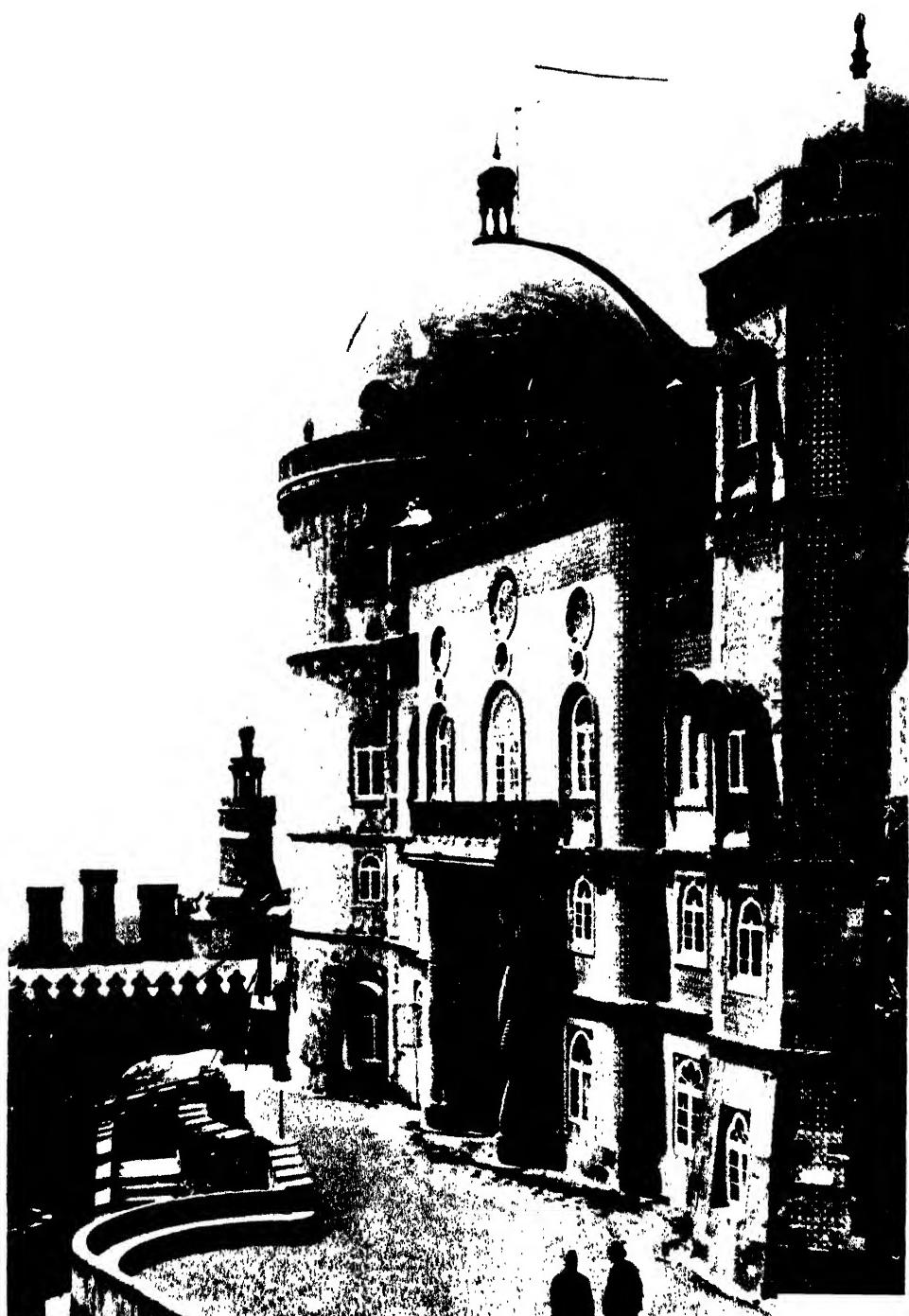
There are in all some three hundred watercourses, but they largely share the features of their kin in Spain and, refusing moderation, are for the most part either dried up or running over torrentially as the result of heavy rains or melting snow.

The coast-line, about 500 miles in extent, is mostly low and plain, but it develops rocks and heights in the lower part of the middle section, and a little north of Lisbon, beyond Cascaes, a certain scenic wildness is presented with a "mouth of hell" where sea and surf lash and roar unceasingly.

Along this coast at intervals are small, discarded forts in good preservation and mediavally picturesque with the peculiarly ponderous royal arms always prominent.

Here the watch was kept for raiders, Spanish and otherwise, coming down the coast, and guns were held ready, too.

In matters of geology and soil the country naturally partakes to some extent of the character of Spain, volcanic effects and rocky formations



O. Uchter Knox

PORUGAL. On a hill above Cintra stands the Castello da Pena with curious twisted columns at either side of the main entrance

Photos, except in pages 3269 and 3273, E. N. A.



PORTUGAL. Upon the banks of the Tamega where it flows past the village of Amarante, hiding behind a screen of trees, are these great water-wheels which revolve ponderously in the gentle stream



PORTUGAL. At the mouth of the Ave lies the sleepy little seaport of Villa do Conde. Crossing the river is an iron railway bridge and on the right is the great pile of the old convent of Santa Clara



E. A. Waymark

Brilliant sunlight and deep shadow, a sleeping dog in the dusty road before a tavern, portray a wayside scene in Estremadura



E. A. Waymark

PORUGAL. There is a drinking fountain, decorated with pillars and tiles, at the edge of a wood that borders the road to Cintra



Uneven paths, that wind amid the aromatic pines, cross the heath upon the lower slopes of the Serra da Estrella about Pinhel



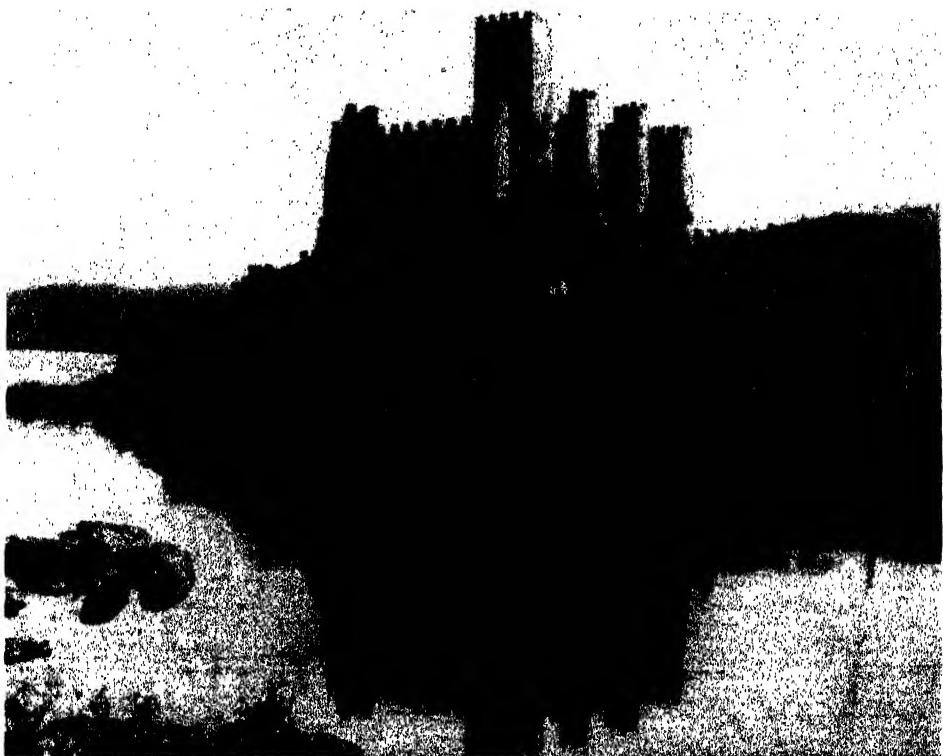
PORUGAL. From the cloisters of a convent one looks over Leiria to the far hill on which stands the ruined palace of King Diniz



This great Cistercian abbey at Alcobaça was built in the twelfth century and secularised in 1834, a part serving as barracks



PORUGAL. *Two extraordinary conical-shaped kitchen chimneys rise above the buildings of the former royal palace at Cintra*



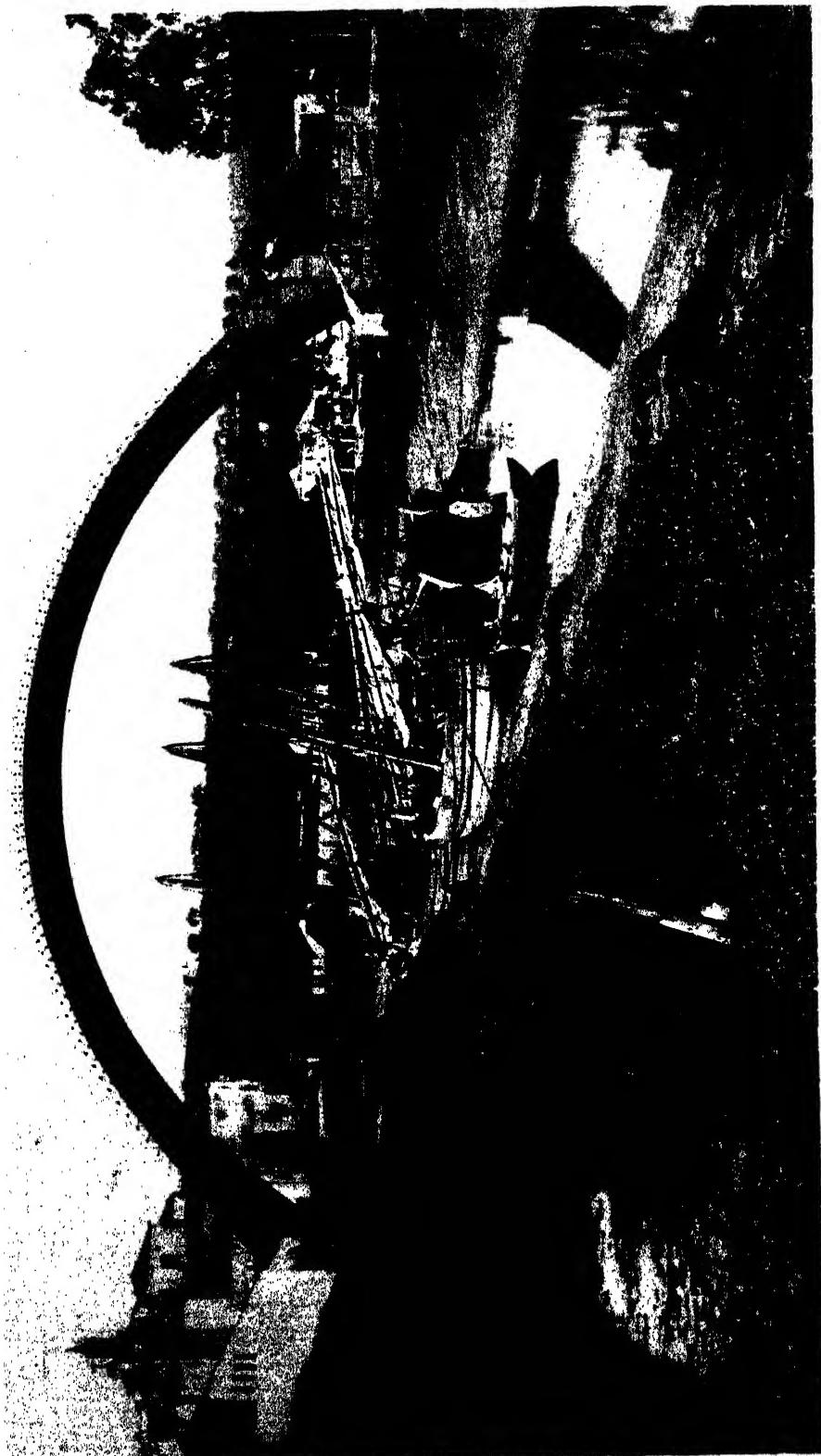
A rocky isle stands in the Tagus near Barquinha, and at one end the Castle of Almourbl rears its battlemented walls and keep



PORUGAL. Unruffled mountain pools lie in many unfrequented hollows among the granite ridges of the wild Serra da Estrella

PORTUGAL.

Boats rigged with one large sail lie moored to the bank of the Sacavem, beneath the arch of the siphon which sucks the water of the Alviella to Lisbon and also serves as a footbridge



on the surface being plentiful ; but on the other hand the abundant rains and the generous climate, with a fair amount of industry in improving the soil, have promoted a considerable measure of fertility.

There are some very wet patches in the Portuguese year, but generally this is a fine climate and one in which most things flourish. Naturally, there is an appreciable difference between the climate of the northern part and that of the south. To all parts of Portugal is common a glorious spring and early summer, when the temperature is mild to warm— 60° to 70° F.—the air soft and balmy, the sky blue, and all the Portuguese nature, laden with flowers, seems to sing of beauty and content.

Climatic Advantages over Spain

We may consider the winter as beginning in December and lasting until the end of February. During this period some snow falls in the north, and it may freeze even farther down when the cold blasts come from Spain. Yet at the popular Mont Estoril on the "Riviera" the thermometer rarely touches the freezing point. On the other hand the general and average temperature is lower than in Spain by reason of the sea breezes which blow mostly from the west and north-west.

Occasionally more than 100° F. are registered in the vicinity of Lisbon, and it is hotter in the Alemtejo and Algarve. Also farther away from the sea, inland, the temperature is higher, but except in the valleys and the salt marshes, which exist in some parts of the interior, it is rarely oppressive and unhealthy.

All over Portugal a heavy rainfall occurs during the winter period and the beginning of spring, much heavier in the north than in the south. Oporto may mark 50 inches of rain in the year and Coimbra, in the middle, 35 inches; while in the extreme south this figure is nearly halved. The Portuguese rains are very thorough—steady long pourings—and one may see them at their best, or worst, at Oporto.

At Mont Estoril I have experienced many days of the most irritating of all rains, the mild drizzle, with a few spasms of rainy blasts so violent as to seem capable of ripping things up. But these are interludes. At other times the sun shines from a deep blue, almost a violet sky, and the atmosphere seems to sparkle.

In Flannels at Christmastime

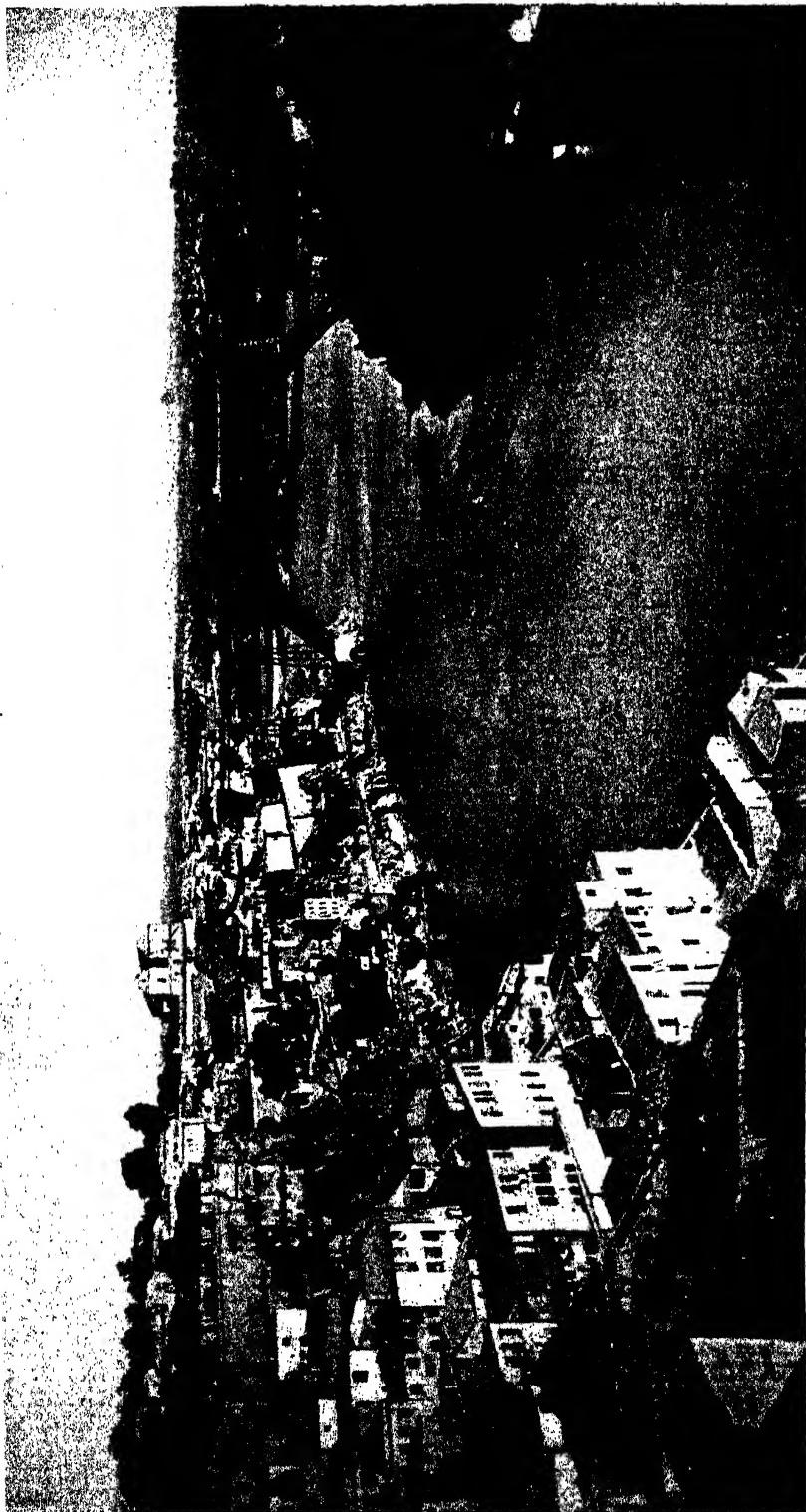
The Portuguese Riviera, while climatically it lacks some of the best features of the other Riviera in the south of France and is cooler, can be very enjoyable and salutary. I have basked in flannels by the sea on Christmas morning there.

Nature herself shows appreciation of this climate, for there is not a place in Europe, and perhaps not in the world, where are greater variety and abundance of vegetation. Nearly everything will and does grow in Portugal, and thus we find specialities of Japan, Scandinavia, Australia, Mexico and other different and far separated parts growing freely, and at least one variety, called the Portuguese cypress, an immigrant, has made its only home here, for it no longer grows in the Azores whence it came.

Splendid Portuguese Oranges

Firs, oaks, chestnuts, poplars, magnolias, limes; birch, carob, cork, lemon, almond, olive and so on down the scale of stature, all are plentiful, and the dates and aloes grow in the warmer places. The figs, of which about 15 million pounds are produced in a fair year, are ripened quickly by the process called caprification, and are of succulent flavour. The eucalyptus thrives; there are maples and junipers and Japanese camellias. The fruit trees give of their utmost. It is claimed that Portuguese oranges are the best of all, and 200 millions are grown yearly.

The display of natural flowers in the spring-time, especially in some central parts and the Minho valley in the north, is gorgeous. Wide



MARIA PIA RAILWAY BRIDGE SPANNING THE NARROW RAVINE OF THE DOURO AT OPORTO

Oporto is built chiefly on the north or right bank of the Douro which is crossed by two great iron bridges. The Maria Pia, 200 feet high, bears the railway line from Lisbon ; that of Dom Luiz I. has two roadways and its arch a span of 560 feet. The bank of the river is so steep that the streets in places are mere flights of steps and the buildings of the city rise from it in tiers. The real harbour of Oporto is at Leixões, as large vessels cannot ascend the river ; it approaches the town by a beautiful winding estuary which might almost be likened to a fjord.

E. A. Waymark

expanses coloured yellow by the cistus are common. On bare patches the purple iris blooms freely with pale blue scillas and many bluebells. There are rosemary and rock roses, the sedum and the honeysuckle, and really every variety of natural flower one can think of as possible to such parts.

The soil being tolerably rich and fertile, and the country Portuguese a labouring folk, maize, wheat, rye, millet, oats and beans are grown in most parts; but still agriculture and its methods are much more backward than they should be, and if the country grew all the wheat it might there would scarcely be need for such extensive importations as now take place, and finance ministers would lose at least one of their stock excuses.

Similarities to Ireland

One is told of phosphate beds having been found at Castelo de Vide and Marvão, and of the intention to turn their products to the soil. It is estimated that no less than 49 per cent. of the land of Portugal, chiefly in the central west and south, is waste and that much of this might be cultivated. To cereals, pulse and pasture 26 per cent. is given, to the vine three and a half, to fruit-trees nearly four, while forests take up over seventeen.

Cattle are reared chiefly in the north, and sheep and goats in the mountainous parts, while pigs are bred extensively down in the south where big acorn woods are to their liking. Even in the middle parts and in the country round Lisbon we see the pig as part of the domestic establishment of the humblest cottages and having right of entry, freely exercised, through the door to the living apartments. In this, as in other respects, some observers see similarities to Ireland.

Much mineral wealth exists, but it is badly exploited, partly through sheer neglect and partly through lack of governmental lead and encouragement, while dear and inefficient transport facilities and shortage of coal for fuel

are other hindrances. Only a little coal is found, and large quantities have to be imported. Wolfram is one of the chief minerals, and some copper and lead mines of consequence exist. Iron, manganese, sulphur and tin are also found, and there has even been mention of gold. There are also some valuable marble quarries.

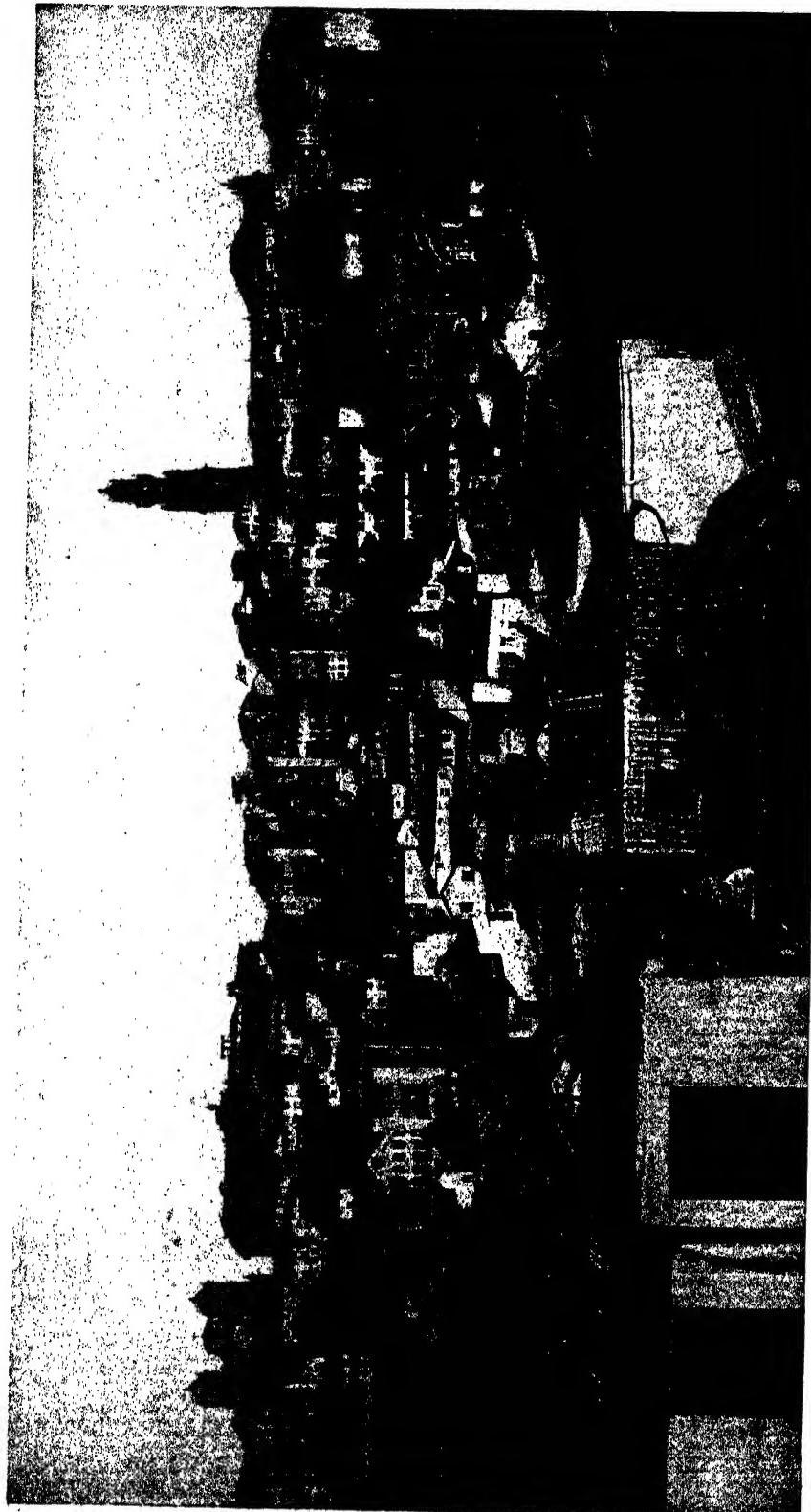
In the Port Wine Country

The chief occupations of the Portuguese people are partly indicated in the foregoing. Sea and circumstance have settled some of the main bases of work and effort. The fishing along the coast is especially good, and the Portuguese are keen fishermen and take advantage of it. Setúbal on the other side of the Tagus from Lisbon is the chief centre of the sardine and tunny packing industry, which leads to a considerable exportation every year.

The wine industry is evidently one of the most important. Wine is made all over the country, with varying characteristics, but generally of comparatively heavy body. Port is, of course, the grand speciality and while the stores are at Villa Nova de Gaia on the banks of the Douro by Oporto, the tiny vines, arranged in terraces of an amphitheatre, that grow the grapes are in the "pais do vinho" some 60 miles to the east of the town, covering in all nearly 100,000 acres. Altogether about 500,000 acres are given up to the vine in Portugal.

Cork and Olive Oil Industry

Then the manufacture of cork is very important, for over 800,000 acres are given to cork-trees and the annual production of raw cork is reckoned at about 176 million pounds, of which a large part is exported. About the same amount of land is devoted to the olive-tree, with the result that over 12 million gallons of olive oil are produced yearly. After these items and agriculture in general there is little left to mention in the way of industry.



TOWER OF THE CLERGY IN OPORTO ON THE CREST OF A HOUSE-COVERED HILL ABOVE THE DOURO

At the western extremity of the Rua dos Clérigos stands the Church of the Clergy, and adjacent to it is the Tower of the Clergy which is a granite structure 246 feet in height, erected in the eighteenth century. Although portions of Oporto have been modernised, closely-huddled, balconied houses with red-tiled roofs still overhang the narrow lanes in the old eastern quarters. Oporto is a great rival of Lisbon, and there is a business-like air about the whole city which is very well concealed in the latter, while the smoke from its factories begrimes the surrounding buildings, imparting an added air of industry.

In the north, in the region round Oporto, as we have mentioned, there is some attempt at textile and similar manufactures, with a little hardware too, but they are scarcely of such magnitude as to be considered national features. At different places the manufacture of plain and fancy tiles goes on, and as the Portuguese adhere firmly to their custom of walling their houses inside and out, and public establishments as well, with tiles, often making up fancy designs, it will continue and perhaps increase. This idea came in the first place from the Moors.

I cannot write of work and production in Portugal without making mention of the part that the Portuguese woman plays in it. She is a wonder in her industry, tireless, patient, indefatigable and strong. We see her working everywhere, cheerful all the time, and sometimes we wonder where her husband is. Perhaps she, more than the man, is feeling discontented with the prospects of life and labour in the native country and causing the extensive emigration, largely to Brazil.

Dependence on the Outsider

Another point in connexion with industries is the common dependence on the outsider for so much that might be made at home. The shop windows contain nothing Portuguese, and when it comes to larger stuff, like machinery, street cars and no end of things, it is a case of Britain, America, Belgium—noticeably—and Germany being chief providers. German penetration since the Great War is strongly marked, and there is considerable evidence of it in the financial establishments.

The general system of trading and banking does not materially differ from that of other countries in western Europe. The country is notoriously overstaffed with civil servants, while as to the professions the most noticeable feature is the large proportion of doctors and the prestige that the chemist's shop enjoys. These establishments are sometimes quite magnificent.

There can be no more delightful country in Europe for holiday purposes, abounding in historical interest, delicious in scenery, with deep rich colourings and smooth outlines—not like the fierce edges of Spain—ancient castles of tranquil dignity beside calm waters, and massed verdure overhanging sweet and noble streams like the Minho.

A Land for the Wanderer

All these and the more that make up glorious Portugal are here and now at their best for the tramp who will trudge along by foot in his own rare and enviable contentment and, being the man of a knapsack that he is, will not cavil at the circumstance that hotels and good inns are few, and that they are not as good as they are dear. Portugal needs hundreds of good hotels; the comparatively few that cater well for the visitor and please him, like those at Mont Estoril, controlled most excellently by natives of Italy, shine out like beacon rays to a weary wanderer. All of which, however, is not to say that the tourist cannot get along quite well, especially in the larger places.

By this is at once indicated the fact that there must be something wrong with the roads and railways, for these, if right, would of themselves compel the hotels. Here then is the truth. The Portuguese roads are shocking; no Portuguese denies it. Governments and all others admit that new and good roads come first in the national requirements. Because Portugal now has them not she lags sadly in her own spasmodic attempts at starting work.

Roads Free from the Motorist

As modern touring is in large part essentially an affair of speed and petrol, motorists are practically barred from Portugal, and thus the country remains unknown and unappreciated by a class of persons now vastly more numerous than ever before, a percentage of whom are always in the future commercially good for the country they have visited. It is a tragedy that, with a deficient



QUANTITIES OF CODFISH DRYING IN THE SUN AT AVEIRO BY THE MOUTH OF THE VOUGA

After the codfish have been cleaned they are placed to dry on slatted benches or on barbed wire fences. A large proportion of the population of Portugal is engaged in fishing or in selling or preparing fish. Besides codfish, sardines are plentiful in the waters about the coast, and donkeys laden with them are driven far into the interior. Aveiro is the capital of the district of the same name and stands on a marshy lagoon which is connected with the Atlantic by an artificial canal. It was the birth-place of João Afonso, who was one of the first navigators to reach the fishing-grounds of Newfoundland.

A. W. Cutler

railway service, Portugal at this crisis is unable to make use to a fair extent of the motor omnibuses and lorries which seem to have come as a gift from heaven to the countries who had neglected their internal communications and could not afford new railways.

In 1921 the government brought in a scheme to repair thoroughly 300 miles of road every year for the succeeding ten years, and simultaneously to build 2,500 miles of new roads, all at enormous cost to be defrayed by a special road tax, increasing until 1937 and then diminishing up to 1943.

The railways, if by no means good, are not as bad as might be expected after this terrible tale of roads. The fastest trains may take eight hours to do the 200 miles from Lisbon to Oporto, the country's supreme link, but the service is courageously maintained. There are in the country more than 2,000 miles of railway, mostly broad gauge, and when it has twice as many it will begin to move much better.

Spirit of Adventurous Voyaging

As to exterior communications and the sea routes, the merchant service now does not echo the great traditions of navigating Portugal, and a costly experiment of complete state ownership was disastrous. But the great spirit for adventurous voyaging remains in the Portuguese as of yore, and finds expression in the long wide roads of air.

The Portuguese airmen flew to the Brazil that their ancestors won and made, and they flew again to even more distant lands. Finally in this affair of communications, business is too often hindered by the occasional uncertainty of the post, the telegraph and the telephone, due to inefficient public services and frequent strikes.

The conditions of living in the rural districts are perhaps better than might be imagined from the backward state of Portugal generally, the weakness of communications, the lack of education and the riotous success of destructive and neglectful politics. The prospects

may be better than some would think. If it is so, the credit is to the humble folk of the country with their industry and care for their lives.

It is true that the conditions, viewed by such standards as obtain in Britain, are extremely poor, but when you have travelled in some parts of the adjacent Spain, especially in the south, you realize that they might indeed be very much worse. The important fact is that we must consider these Portuguese as being of Celtic strain and inspiration.

White Homes Amid the Green

The most lowly Spaniard in the south will not unduly shrink from living, if needs must, in a hut made of earth and sticks and straw—no better than a savage—but the poor Portuguese will rather build himself a cottage if he can. So we see the green landscape dotted plentifully with these small and simple homes, shining white amid the green, but they are too often poorly equipped, with only earth for the floor and a big chest for containing the family clothing as the chief item of furniture.

In the villages and small towns we find an awakening and striving towards building needs, notwithstanding the government's neglect. Rows of low brick and stone tenements with ground floor only are rising in some profusion; they are extremely simple—hardly anything but walls and roof—but the indication and tendency are good. I have found in many districts through which I have tramped an inclination for the village life to close up to itself for its better comfort and convenience, since the powers at Lisbon had evidently become demoralised and unhelpful.

Politics before Education

I have often discovered a room or tenement set apart as a village club, exceeding small as was the village; and, though illiteracy is almost universal (78 per cent. of the population), there is a desire for knowledge, especially about what the government is doing or is most usually not doing. After the

hours of labour I see groups of poor folk in the villages gathered round one of their number on a doorstep or at some regularly appointed place, listening to the news of the day—or it may be several days behind—read out to them by their erudite companion.

Oporto a Foil to Lisbon

Portugal has two cities supreme above all others, Lisbon and Oporto, each of world fame or international significance and importance, and from these there is a sudden fall to a small series that are only a tenth the size or less. A chapter has already appeared concerning Lisbon, the pleasant capital of Portugal, which is nominally or traditionally at all events the political and intellectual centre. Oporto, in the north, is in a large measure the commercial foil or counterpart to the political capital, which it regards with a considerable measure of disdain.

Oporto, which with a population of a little over two hundred thousand is less than half the size of Lisbon, is a busy commercial place with its true harbour at Leixoes at the mouth of the Douro. (In Portuguese "o" is the masculine article, "the," and "porto," which is the Portuguese name of this city, is, of course, "port.")

City of Versatile Occupation

It is a handsome and well-equipped city, built largely on two steep and opposing inclines between which rests the main public square, while another part laps over upon the bank of the Douro, crossed by imposing bridges, on the other side of which is the suburb called Villa Nova de Gaia, where are the great warehouses of port wine to the manufacture of which, as all the world knows, this city is largely devoted.

Here also to a small extent other manufactures are carried on, especially of cotton, silk and woollen goods and also of lace, leather and paper, hardware, pottery and cutlery. There is, indeed, in the peninsula no city of more versatile and regular occupation.

In one of its streets, the Rua das Flores, are many shops in which is displayed the silver and gold filigree work made in the place. It has a good street-car service, and the majestic tilings occupying the whole of the walls of the entrance hall of the railway station and depicting scenes in the history of Portugal is one of the sights of the place.

Not far north of Oporto, in the province of the Minho, is the ancient city of Braga, where now some manufactures of metal goods and felt hats are conducted. Braga, with religious associations, is also a place of pilgrimages, but the wanderer will most remember its beauty as it rests amid an expanse of the charms of nature, soft and tranquil in their character, that soothe the weary.

Rendezvous for Rebels

On the northern frontier is a very quaint and interesting old town, Valença do Minho, with extensive fortifications looking across the big river to Tuy on the Spanish side, likewise fortified, these having been old rivals through centuries and most admirably placed for taking pot shots at each other with their guns when occasion arose, or seemed to do.

Now a big international suspension bridge here joins Portugal to Spain, and Tuy is the place whither in times of political stress and strain exiles and conspirators against the form of government in vogue at Lisbon move up from Vigo and prepare to cross.

Coimbra is the chief city of the middle section of the country and, being the seat of Portugal's university, is hallowed and praised. It is gloriously situated on a rocky slope leading by somewhat neglected streets down to the banks of the river Mondego.

Castello Branco (note that in Portuguese "r" commonly takes the place of the Spanish "l") is a small town with much marble adornment from the adjacent quarries, and at Batalha there is a famous convent. Bussaco, a short distance north of Coimbra, is renowned for the richness and beauty of its woods.



E. N. A.

BEAUTIFUL CLOISTERS IN THE DOMINICAN MONASTERY AT BATALHA

This great monastery, which might be termed Portugal's Battle Abbey, was built in the fourteenth century by King John I. to commemorate his victory over the Spaniards at Aljubarrota. The Royal cloisters are in the Manoeline style, and the upper parts of the arches are filled with tracery. The monastery was built of white limestone, which time and weather have coloured to a rich golden brown.

Within the region of Lisbon are some attractive and famous places. Chief is Cintra, carrying the ruins of a Moorish stronghold and the Pena palace set upon a peak where the Portuguese sovereigns resided. Set amid masses of verdure, Cintra is a lovely spot, which poets in their ecstasies have declared to be the sweetest in the world.

A few miles away on the coast is what is called the "Riviera" of Portugal, happy in an exceptionally gentle winter climate and to which considerable numbers of foreigners, especially British, resort. Mont Estoril, with a sandy beach and a picturesque background, is the centre of this part. At Estoril, nearer Lisbon, the Portuguese have conceived the idea of establishing a world pleasure resort to rival in equipment any other, and some most imposing buildings in the way of casinos, baths and the like have been erected, while Cascaes, on the other side of Mont Estoril, was once a fashionable resort of royalty and is now a popular pleasure place and a fishing station.

Then away on the other side of the Tagus is Setúbal, the third largest town in the country, with a considerable history, which includes partial destruction by earthquake, and various modern interests, such as fishing, sardine packing and trading in salt and wine.

Santarem, farther up the river, is from its position often called the key of

the Tagus. Beja, with an ancient castle, and Evora, the capital of the province of Alemtejo, are the chief towns of the southernmost section of Portugal. Evora, with its quaint character and Moorish look, is one of the most interesting cities in Portugal. They have nearly all one striking quality in common, and that is the beauty of their situation. The general type of their domestic architecture contains no special features and does not differ greatly from the average simplicity of southern Europe, save that perhaps we find delicate colours more frequently employed for outside walls, with floral and other patterns painted on them.

The Portuguese have a country to be proud of, and one that in this striving and anxious modern world will serve them well if they and their governors will be fair to its willingness and capacity. They are a people who, once very great, have still much power left within them.

Hard and strong and temperate, they are well made, though diseases have hurt them. Two main types are found, one the dark-skinned faces with deep markings indicating strong character, which is the type that comes to our minds most when we recall the great adventures of the Portuguese in the past and the heroes who conducted them. The other class of physiognomy is more modern, the character being lost in a certain roundness and swarthiness.

PORTUGAL : GEOGRAPHICAL SUMMARY

Natural Division. The seaward section of the ancient plateau of the Meseta. The north and south extent corresponds to the grain of the land which lies between the fractured coast-line and the higher edge of the main plateau. A land of plains and uplands where the main plateau rivers, suddenly dropped in level at the frontier, flow almost at base level, and tend to make plains of accumulation. The frontier is approximately a line demarcating a region of easy, from one of more difficult, communications.

Climate and Vegetation. A pleasanter, warmer and more productive Ireland. Oceanic winds bring moisture, especially from the north-west; more southerly

latitudes bring to south-facing slopes greater variety of flora.

In some respects a coastal counterpart of Provence (q.v.).

Products. Cork, oak, olives, wine, figs, oranges, wheat and other cereals. Phosphates. Cattle and pigs. Tunny and sardines.

Communications. Roads bad. Railways, broad gauge, slow and inadequate.

Outlook. Primarily the Portuguese, like the Irish, lack education, and extract little more than bare sustenance from bountiful natural resources under a supine government; the future rests in the spread of knowledge and its application to the ordinary conditions of rural economy.

PRAGUE

The “Golden City” of Bohemia

by Lieut.-Col. B. Granville Baker, D.S.O.

Author of “From a Terrace in Prague”

THE general impression of Bohemia’s capital is that it deserves the epithet bestowed upon it by those that dwell therein—Zlatá Praha, “Golden Prague.” This ancient city stands as it were in a golden aura reflected from the wide sweeping curve of the river Vltava. Out of this golden haze rise towers and pinnacles, and dominating all is a vast mass of rock on which crowd tier upon tier of stately buildings, culminating in Prague’s crowning glory, the Cathedral of S. Vitus.

Prague lies right in the heart of Bohemia, which holds a central position in the continent of Europe. Though mountain barriers guard Bohemia on every side, yet are there highways, broad rivers, along which its capital has kept touch for centuries with the world outside; by these means Prague has been influenced both in its aspect and the life of its people, and has in its turn conferred benefits on others. This exchange accounts in great measure for the character of Prague, and nature, history and legend have all contributed richly towards its formation.

The Legend of the Doorway

Nature took the first steps by so ordering the rolling uplands through which the Vltava threads its way that several eminences rise up abruptly from the river’s bank and offered sites suitable for human habitation in those days when security was no matter of course. Of these heights the first in time as a dwelling place is Vyšehrad, a rocky promontory which overhangs the Vltava on its right bank. On this the earliest rulers of Bohemia, known to legend only, established themselves; a broken bit of masonry as solid as the rock of

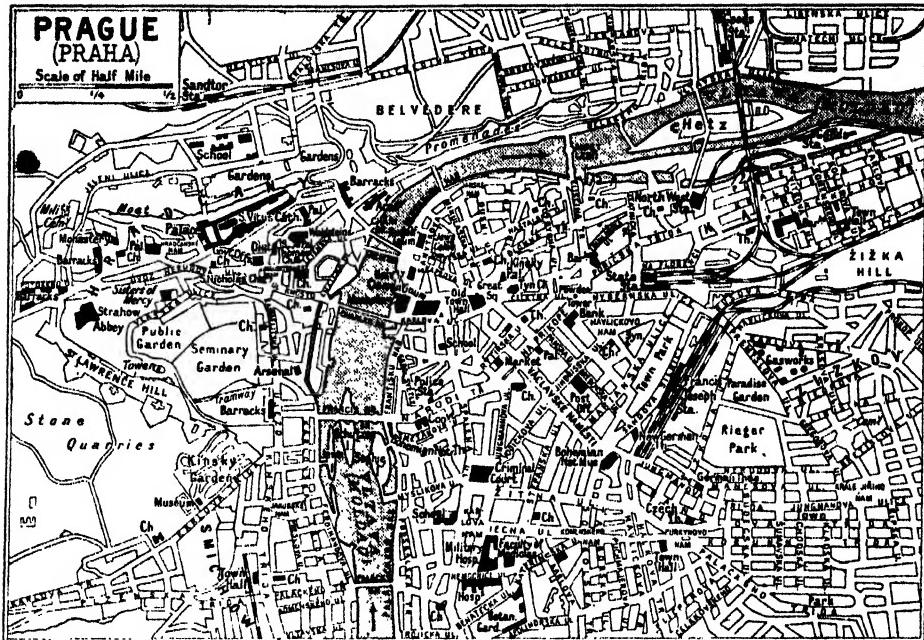
Vyšehrad itself tells of those early days of Bohemian nationhood.

From this eminence a legendary queen, Libuša, pointed out the bold promontory on the left bank of the river and a mile or so downstream as the crow flies—a mighty bluff half-encircled by the Vltava, rocky and tree-clad, with a deep cleft to north-west, where a brook forces its way to the river, and a broader ravine to eastward moving more gently down the tree-crowned ridge. “ You will find in that forest,” she said, “ a man fashioning a doorway; there will you build a city and it shall be called Praha ”; the derivative is said to be from the Slavonic práh, a doorway. And so Prague came to be.

Centre of the Holy Roman Empire

While there yet lingers about Prague a faint air of those distant legendary days, there is a far stronger sense of the medieval. Seen under the silvery mists of a summer’s morning or in the golden glow of winter twilight, Prague with its towers and pinnacles outlined in snow is the ancient home of kings, of rulers of the Holy Roman Empire. The dawning light gradually reveals less ancient features of the city. There are the copper domes of churches decorated with the flamboyant extravagance of the seventeenth century, there are colleges and palaces ranging from the beauty of the Italian Renaissance, the plans brought here by wise rulers of long ago, to the flamboyant vulgarity of baroque and the impertinence of late nineteenth century German architecture.

The risen sun that shines full on rows of modern buildings lights up quaint little backwaters where you may find a Romanesque tenth century chapel half



MODERN PRAGUE SPREADING ALONG THE BANKS OF THE VLTAVA

hidden among trees, overshadowed by a baroque monastic building now in use as a printing establishment ; here and there a market-place surrounded by colonnades under gabled roofs, in the centre of the place an ancient well under a wrought-iron cage ; an ancient temple, smoke-grimed, sunk below the level of a broad street, along which run the clang-ing electric cars between tall blocks of mansions the more modern of which show a tendency towards expressing genuine Slavonic art instead of copying from the neighbouring Germans as was once the custom.

There are gardens with glowing flower beds and shady trees and fountains ; gardens on the sloping heights, a smother of fruit blossom in the spring, all glorious in gold and russet in the autumn, beautiful at all times, even when winter transforms the naked branches into a fairy network of silver lace ; gardens about the churches and in various ex-pected and unexpected places, where children have playgrounds laid out for them especially, where workers rest at midday or recreate themselves after the day's toil is over.

And among all these glories, monu-ments of the past and stately expressions of the present, and amid the unfailing beauties of nature, the people of Prague contentedly go about their lawful occa-sions. Their chief trouble, if they have any others, is the housing question, for Prague as a consequence of the Great War, has risen from the status of a provincial town to that of capital of an independent state, and has almost doubled its population in conse-quence.

The day's work begins early in Prague, not only for those who deal in country produce and are up betimes in the morning to meet the great wains that rumble over the stone pavement ; this is pretty much the same in all great cities. But in Prague it seems that all business, even that of goverment offices, begins at least an hour, if not two hours, earlier than that to which English people are accustomed.

The work ends later in the evening, too, but against that there is a solid hour or two in the middle of the day during which no business whatever is done. It is the dinner-hour ; shops are closed, offices, both government and

private, are deserted, even the churches are locked up; and those entrusted with charge of the latter seem to require more sustenance, or take longer in absorbing it, than do any others. Therefore the traveller should not attempt to go sight-seeing between 12.30 and 2.30 p.m.

Prague is a very busy place, has a number of important factories, locomotive works and printing establishments, and in addition to this now collects and deals with the produce of the whole of Bohemia and those other provinces of the former Austro-Hungarian monarchy—Moravia, part of Silesia and Slovakia, all united into one free and independent republic. Then there is considerable life on the river, tugs hauling heavy barges, timber rafts floating down from the wooded slopes of the Bohemian forest, and a fleet of pleasure steamers, gaily painted in the

national colours, red and white. It is hard to determine whether angling should be considered as business or pleasure. There are many anglers, and their aspect and the results of their pastime suggest that their pursuit is neither business nor pleasure, but penance, especially when they sit shivering on a strip of carpet by the side of a hole in the ice.

Business over, the city of Prague offers pleasure in many forms. For the serious-minded there are museums, chief of which is the National Museum standing at the highest end of a broad avenue, the Václavské Náměstí, the show street of the city, round about which are gathered the principal hotels, restaurants and shops. There are two opera houses, one for those who prefer the language of the country, Czech, the other for those who would rather hear grand opera in German. Then, tucked away among old



PRAGUE: THE OLD TOWN-HALL FACING THE OLD TOWN SQUARE

Occupying one side of the Old Town Square is the Rathaus or town-hall which was built on the site of an older structure now represented by the great clock tower dating from 1474 and the chapel on the left. Above the balcony on the second floor are four statues of famous rulers of Prague. Opposite the town-hall is the old Hussite Tyn Church, begun in 1370.

palaces with tiled roofs and stately porticoes, with here and there some lovely Gothic projection, is a quaint old theatre, the Mozarteum. A stone balustrade runs round its sides at the first storey, and from this balcony you may look out over the flower market on one hand and the fruit market on the other, over groups of large umbrellas that shade great masses of the most glorious colour.

Pleasures for Every Taste

The setting, the colour in this particular corner of Prague have probably not changed appreciably since the night when Mozart conducted the first performance of "Don Giovanni" here in this old theatre.

The immediate neighbourhood of the Mozarteum was the centre of the intellectual as well as the social life of Prague for many generations, for here are some of the oldest collegiate buildings of the famous university founded in the fourteenth century by Charles, son of the blind king, John of Bohemia, and fourth of that name as emperor of the Holy Roman Empire. The son of Charles, Wenceslaus, king of Bohemia and the Germans, and emperor too, lived and made merry near by.

The pleasure area has extended since his time to include the Národní Třída, and the supposed taste of foreign visitors is catered for in a style that is international, and in places even a trifle décolleté.

Wise Use of a Fine River

The citizens of Prague enjoy less sophisticated pleasures in the numerous cafés and restaurants, where not only is the living good and cheap, but they can have their fill of music; and in this respect nothing but the best will serve the children of Prague. The centre of social life for the inhabitants is a large building called the Obecní Dům, the Town House, a super-restaurant with large concert hall and many chambers let out on occasion to clubs, societies and social gatherings.

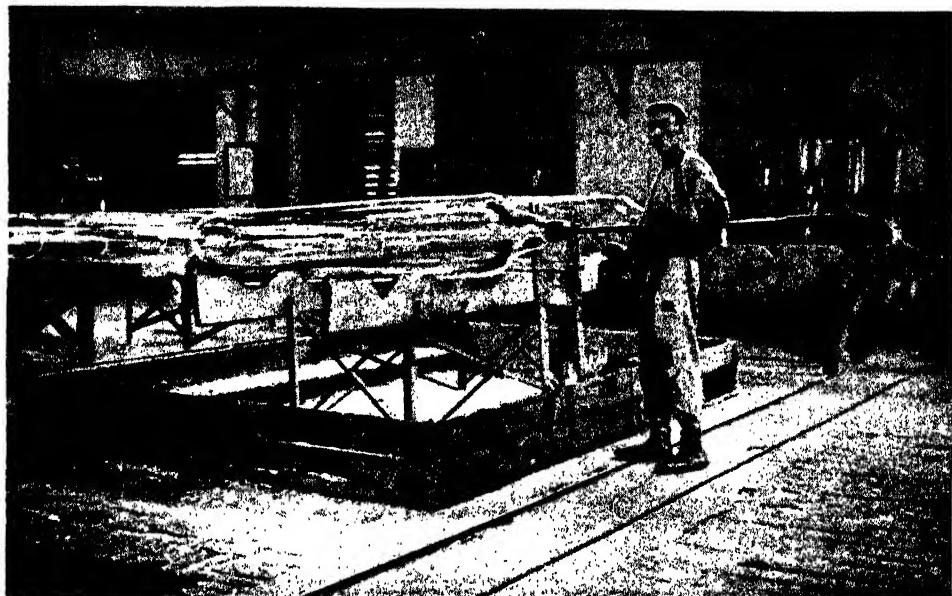
This Town House, with its dome, its gilding and plate-glass windows, stands in strange juxtaposition to one of the loveliest monuments of ancient Prague, the Powder Tower. Originally one of the gateways of the Old Town of medieval Prague, this tower was built by King Vladislav II. in the latter half of the fifteenth century and rises serenely in all its beauty of ornate Gothic, with soaring saddle roof, flanked by tapering pinnacles, above the roar and rattle of the city's traffic.

Wisely the people of Prague draw full enjoyment from their river. Though the Vltava is useful, very useful, as a waterway, yet it has not been degraded to the status of a dirty drudge, but adds a sparkling stream of healthy pleasure to those that live by its banks. There is boating, sailing, bathing; there are well-tended gardens on the islands, with music and all manner of refreshment in the summer months. Then there are the pleasure steamers by means of which you may explore the upper reaches of the river or drift down to the vine-clad hills of Mělník with its medieval castle..

Return of a Lost Legion

Closer at hand there are the wooded valleys that carry little streams down from the fertile tableland to westward; you may wander up one of these through cherry orchards to the gentle slopes of the White Mountain, where Bohemia's cause of religious freedom was lost in battle in 1620. A strange landmark stands here, a hunting-box of a Bohemian king of the Middle Ages, built in the shape of a six-pointed star; it is now the museum of the Czech legionaries who fought their way from Galicia across Russia to Siberia and returned to their country when it regained its independence.

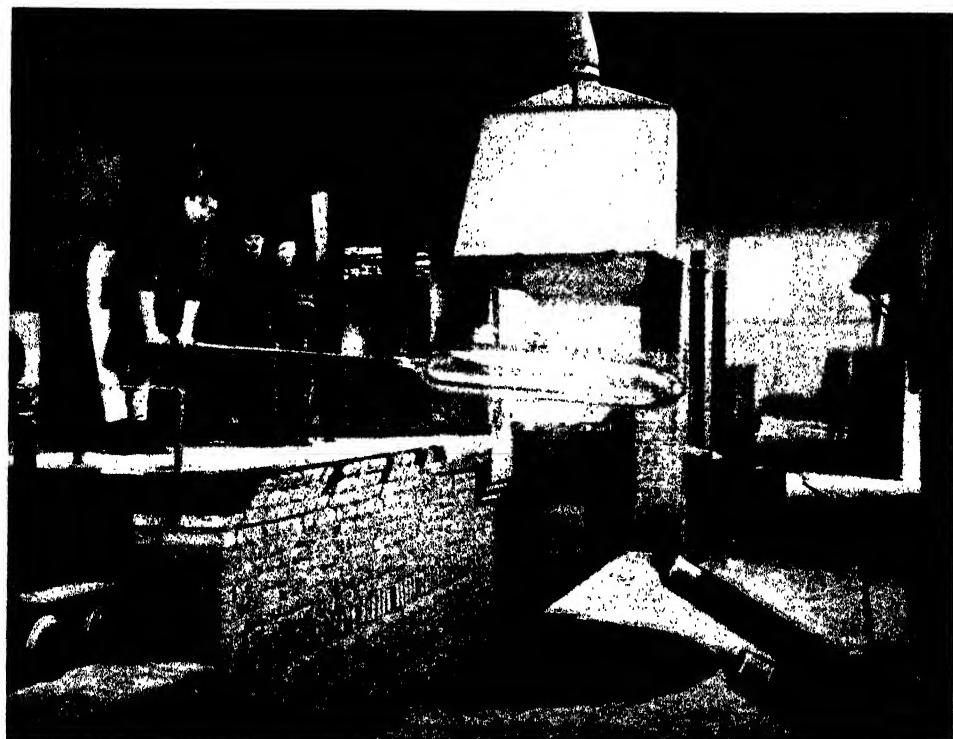
The development of Prague and its expansion at successive periods of its progress are clearly marked by public buildings. There is first that broken bit of ruin already mentioned which clings, limpet-like, to the rocks of Vyšehrad.



E. N. A.

INTERIOR OF A GLASS FACTORY IN THE DISTRICT OF PRAGUE

In the thirteenth century the glass industry was introduced into Bohemia from Venice, and owing to the presence of fuel and suitable minerals in close proximity it soon became of great importance. Glass mixtures melt at temperatures ranging from 2,200° F. to 2,700° F., and when in a state resembling treacle, the glass can be coiled round a blowpipe, such as the man is holding in the photograph



E. N. A.

SHEET GLASS: HEATING THE CYLINDER AT A "BLOWING HOLE"

In making sheet glass the blower stands on a platform before a special furnace called a "blowing-hole." The blower heats the lower portion of the piece of glass attached to the blowpipe, and swings it over a trench in front of the platform, while he keeps it distended by blowing. The mass of glass forms a long cylinder, closed at one end, and is subsequently rolled out

This remnant of a period before recorded history took the place of legend is popularly called Libuša's Bath. This legendary lady is made responsible for choosing the site on which stands the castle of Prague, the Hradčany. Here are no crumbling relics of prehistoric buildings to tell of any activities on Libuša's part, but there certainly are foundations of great antiquity, and it is clearly proved that this bold promontory with its guardian castle became the centre of a fine city at a very early date in European history.

A Corner of the Middle Ages

To-day the glorious pile which crowns the castle hill may be considered the finest in Bohemia's story. You will find great foundation stones under an ancient Romanesque church, patches of old walls and ramparts, a round tower or so, a square gateway framing an exquisite view over the city. A late Gothic banqueting hall dating back to that Vladislav of the Powder Tower comes as a pleasant surprise in the midst of the monotonous buildings which successive Hapsburgers, since 1620, have managed to rob of all outward signs of romance.

Here are the government offices and official residence of the president of the new state of Czechoslovakia. But despite the efforts of unimaginative Hapsburgers, there is an old-world, romantic cluster of buildings which has escaped the renovator; it is near the banqueting hall of Vladislav, and shows you the scene of that act which set Europe in flames for thirty years in 1618. In this corner of the Hradčany there has been little change during the last three centuries.

In the Shadow of the Cathedral

Right in the middle of the government offices, and overshadowing them, rises the Cathedral of S. Vitus. It stands on the site of at least two earlier churches, one of which, a round Romanesque building, is said to have been built by

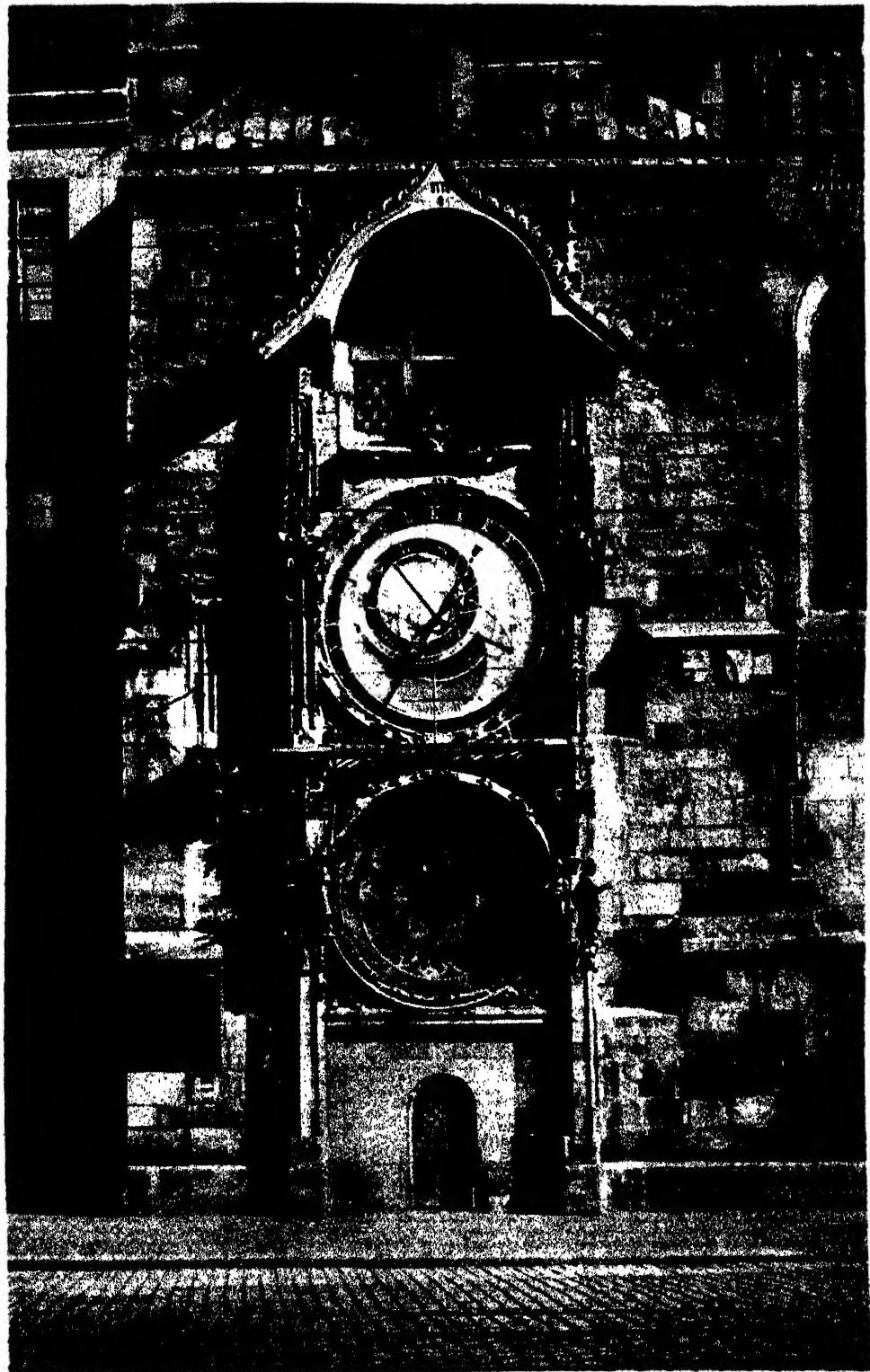
S. Wenceslaus, prince and martyr, a contemporary of Athelstan, the Saxon king of England. The present building was begun by Matthew of Arras, whom Charles IV. had brought with him from France, some time about the middle of the fourteenth century; it has not yet reached completion.

For many centuries the cathedral consisted of little more than the chancel, rich in monuments of stone and wrought iron; and above all in the chapel to the princely founder, Wenceslaus. The nave has just been finished, happily all in the purest Gothic style, and according to the plans of Master Matthew; so now this glorious pile, almost completed, crowns the dominating height of the Hradčany in a marvel of symmetry unsurpassed, if even equalled, by any other such sight in Europe.

Beauty even from Factories

Clinging to the flanks of the Castle Hill, and clustering round its foot, are red-roofed palaces amid old-world gardens and churches—that of "Our Lady under the Chain," gutted in the Hussite wars, its squat towers rising above a sea of verdure, that of S. Thomas with tapering spire, and the great Jesuit temple dedicated to S. Nicholas, its copper dome and graceful campanile soaring high above the housetops, a monument to the defeat of Bohemia's army at the hands of the Empire in 1620. This district of Prague is called the "Malá Strana," the Small Side, and was for centuries a self-contained borough until the town spread out to include the village of Smíchov, now an industrious suburb with many factories that send their volumes of smoke down stream on the evening breeze to wreath ancient and modern Prague about with a diaphanous shroud.

The connexion between the Hradčany and Vyšehrad was maintained by means of a bridge; the earliest one of wood, a later eleventh century one of stone which, broken by floods, was replaced by the present glorious structure, the work of Charles IV. Ancient bridge-head



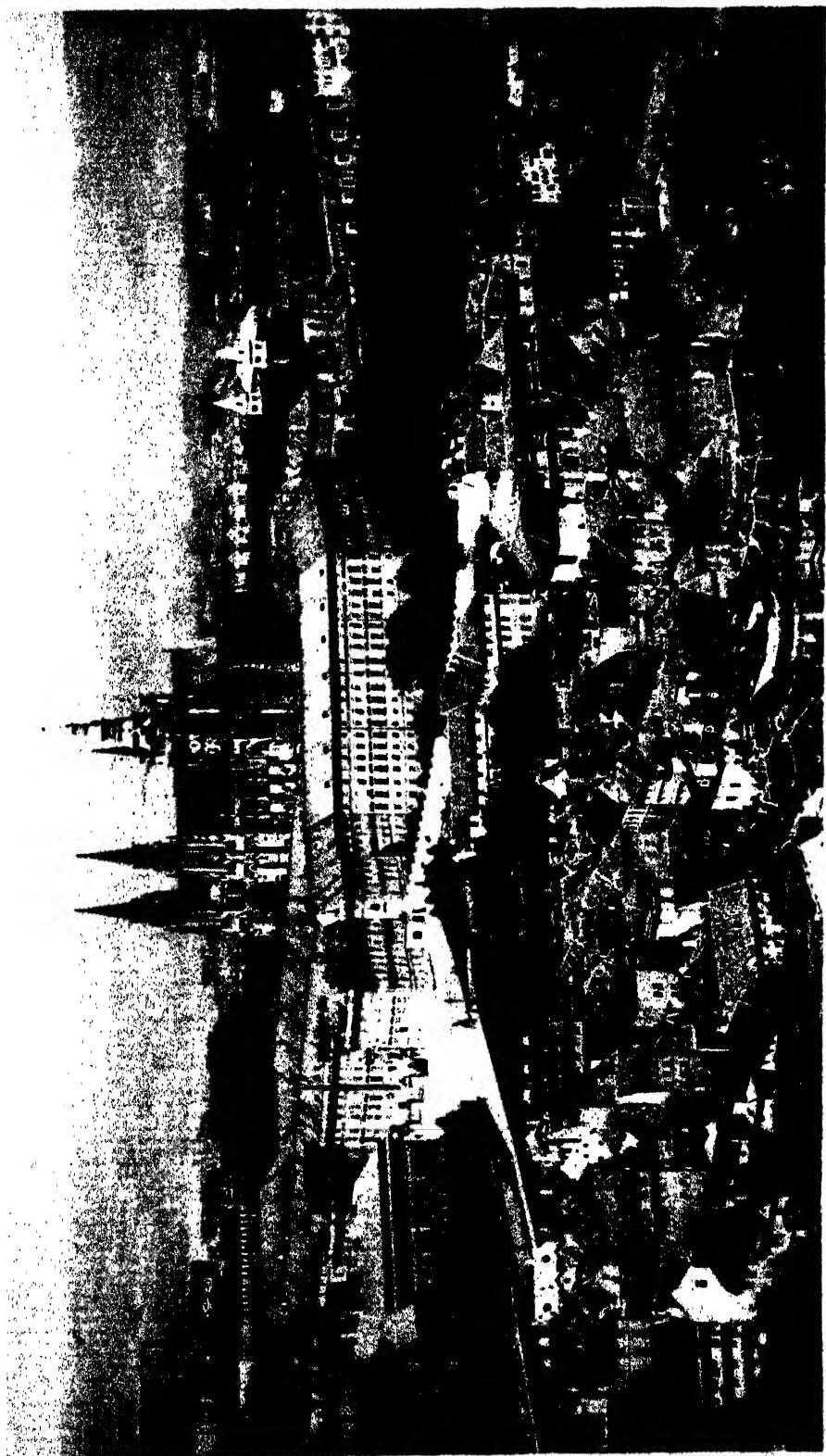
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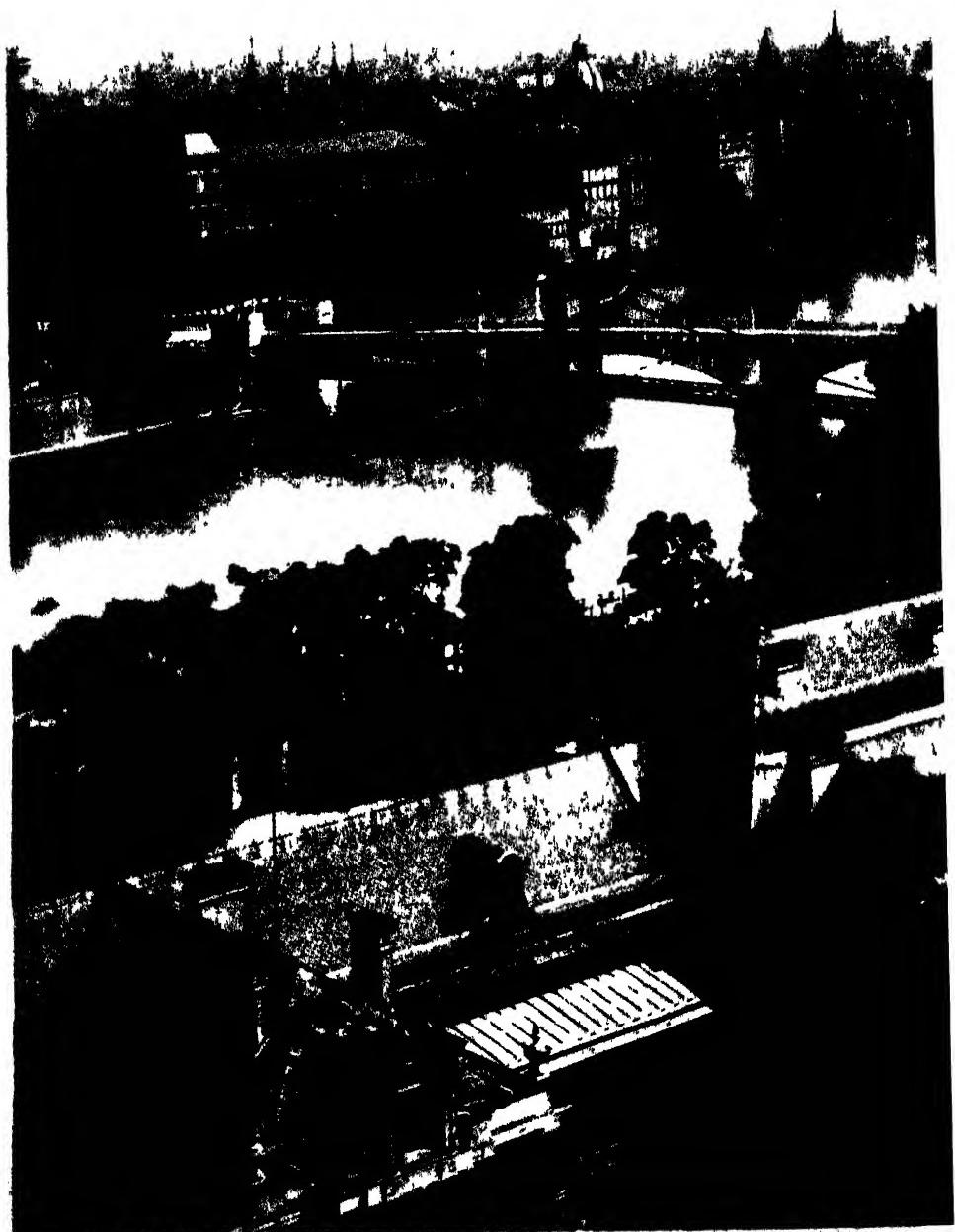
PRAGUE. Skill and fantasy combine in this astronomical time-piece, with moving figures and crowing cock, set in the Old Town Hall

E. N. A.
PRAGUE. When winter's snow lies thick on roof and tree, Hradčany is a lonely sight with the Castle's huge bulk, capped by the towers of S. Vitus, spread out on the heights above the Vltava's left bank

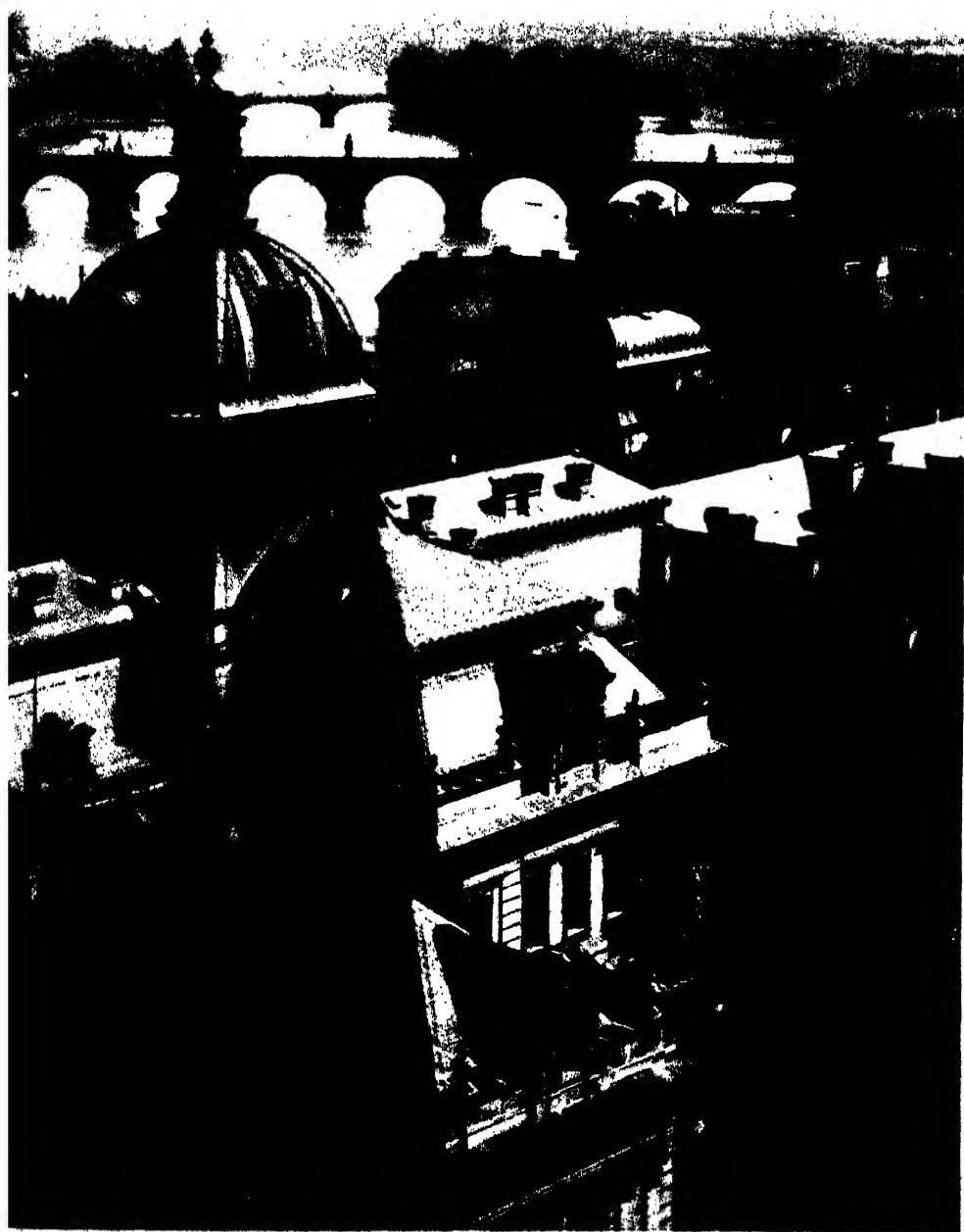


^{II. Boemia}
PRAGUE. Many memories of ancient splendour linger about the Gothic Cathedral of S. Vitus, where Bohemia's kings were crowned, and the vast palace, now the residence of the president of the Czechoslovak Republic

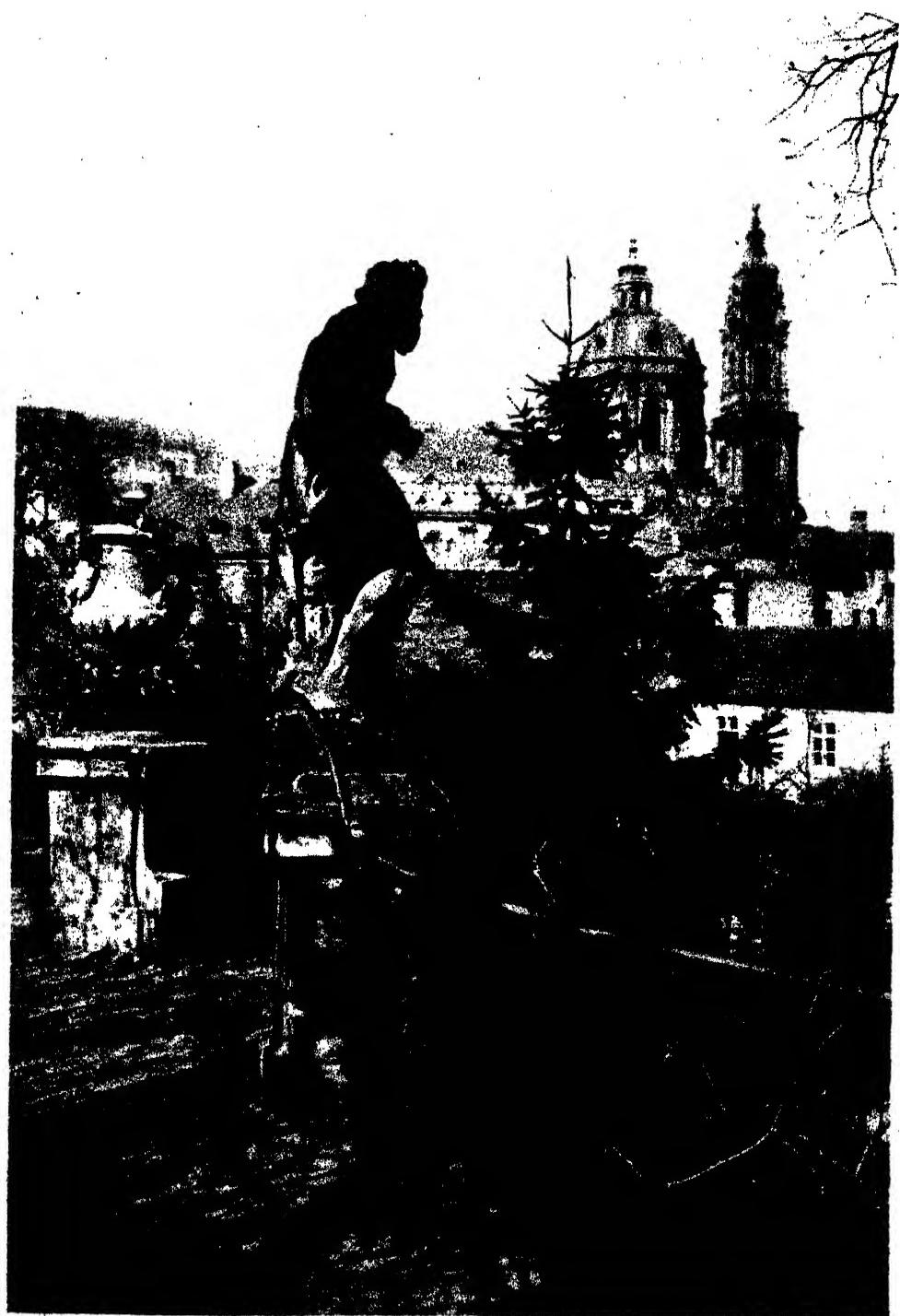




PRAGUE. The several bridges which span the Vltava's broad flood are well worthy to adorn one of Europe's most ancient and beautiful cities.

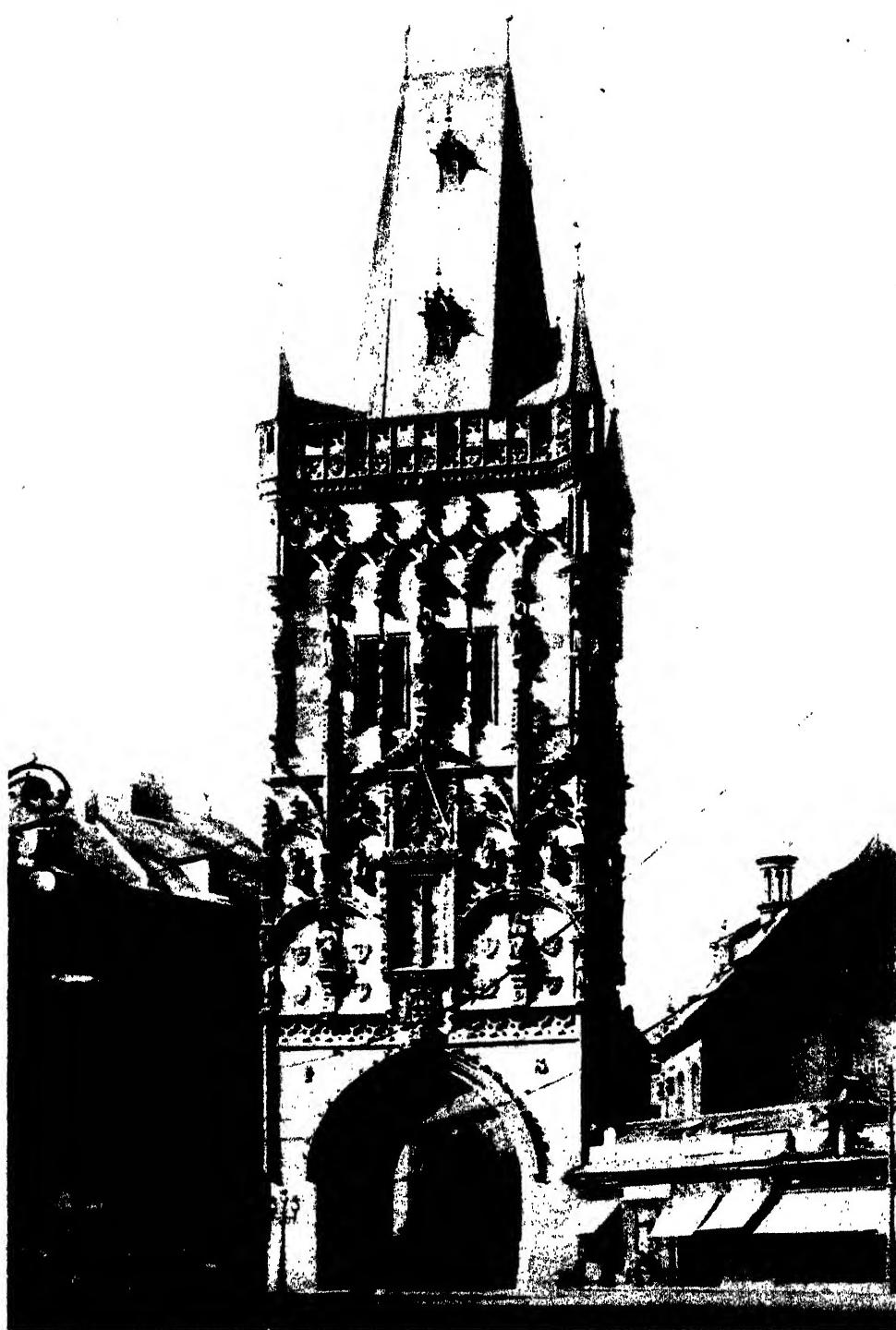


Upstream, beyond the Chain Foot Bridge and New Bridge, may be seen the long, many-arched Charles Bridge, famous since its foundation in 1357



D. Heathcote

PRAGUE. *The garden of Vrbousky, near Carmelite Street, affords an unimpeded view of the dome of S. Nicholas, the former Jesuit church*



PRAGUE. Built in 1475 by King Vladislav, the Powder Tower is one of many similar structures which rise in Bohemia's venerable capital



PRAGUE. Before the terrace of the Bohemian Museum stretches the foliage-fringed Václavské Náměstí, its wide, straight course dominated by a mounted figure of Václav, or Wenceslaus, Bohemia's saintly prince

B. Eason.

towers still stand as silent witnesses to the stirring events which made up the life of Prague, the passage of kings and emperors, fierce fights between contending religious factions, between marauding Swedes and the stout defenders of the city.

A new settlement had grown up on the right bank of the Vltava well before the fourteenth century began, and yet another between it and Vyšehrad, known to this day as Old and New Town respectively. Each of these towns enjoyed a separate entity with municipal and other civil authorities and buildings appropriate to the purpose of such bodies. A winding street named Carlova Ulice after Charles IV. leads from the bridge he built, under the shadow of gabled houses, to the heart of the Old Town where overlooking an open space known as Old Town Square stands the medieval town-hall.

Church of Our Lady of Tyn

An historic site this open space, for here those Protestant leaders of Bohemia, twenty-one in number, who had not fled the country after the Battle of the White Mountain, met martyrdom. The rays of the rising sun cast over this historic site long shadows from the towers and pinnacles of the church of "Our Lady of Tyn," which has served as the principal church of the Old Town since 1310. The show entrance to this church is on the north side, tucked away in a narrow alley, a Gothic archway of great beauty; it is opened only on the rarest occasions.

Though Gothic architecture seems to strike the dominant note among the glories of Prague, yet you may find here and there exquisite examples of later art; and of these the most lovely stands in a garden on a high ridge to westward of the Castle Hill and separated from it by the deep ravine already mentioned. This is the Belvedere, the work of Giovanni di Spazzio, a beautiful example of early Renaissance art with its airy loggias, its wrought architrave and long domed roof. Ferdinand of Austria had

it built for Anna his queen, daughter of Vladislav II., whose son Louis perished at the battle of Mohacs and thus left the succession to the throne of Bohemia to a Hapsburg.

New buildings are growing up around Vyšehrad, the site of the first Slavonic settlement, suburbs are spreading out into the country and the hill on which Ziska the Hussite won a famous victory is now covered with factories and workmen's dwellings. Electric trams clang along broad new thoroughfares by the embankments of the river and wind their way through a maze of old world alleys and through an ancient gateway.

Reverence for an Ancient City

Yet the more Prague seems to change, to outward appearance, the more resolutely does it retain its character the foundation of which was so truly laid many centuries ago. Whatever their differences, and they were many, the mixed races which inhabit Prague—Czechs, Germans, Jews—have one aim in common, progress, and one sentiment in common, love and reverence for their ancient and beautiful city.

Like other great cities of the world Prague has passed through great tribulations. There was a golden time when Prague was a centre of high culture, of exquisite refinement in arts and crafts, of international trading. For some centuries Prague lay eclipsed, set aside from the great doings of the world, but the light of learning still burnt steadily, arts and crafts still flourished though others reaped the benefit, and trade was deflected into other channels. Now Prague, as an independent capital, has come into its own again.

Discipline Taught by Adversity

The discipline through which the city has passed, the lessons learnt in the school of adversity, developed and strengthened its character. Thus reinforced, this city with its glorious past looks forward into a future full of promise, to an affirmation of its epithet, Golden Prague.



POPLAR-LINED AVENUE OF TOMBS IN LES ALISCAMPS AT ARLES

To the south of Arles lies a former Roman cemetery called Les Aliscamps which, by tradition, was consecrated for Christian sepulture by S. Tropheus. Many of the monuments were destroyed during the Middle Ages, and the remaining sarcophagi have been placed along the Avenue of Tombs. At the end of the avenue is the Church of S. Honorat, rebuilt in the thirteenth century.

PROVENCE

Romantic Country of the Troubadours

by Percy Allen

Author of "Impressions of Provence," etc.

IF France be indeed "the second fatherland of every cultured spirit," Provence, by right of inherent beauty, intrinsic interest and quite indefinable charm, is, to many minds, the choicest region of that "seconde patrie."

By "Provence," however, as the word is used in this article and generally understood to-day, I do not mean what the Romans meant when they talked of "Provincia Romana," the Gaulish province, known officially as the Narbonnaise, that stretched away northward almost to the gates of Lyons and westward to the Pyrenees.

I mean, rather, that smaller mountainous portion, or corner, of the Roman province averaging no more than about 120 miles from east to west and 80 from north to south, and bounded on the east by the Italian frontier, on the south by the Mediterranean, on the west by the Rhône river and on the north—rather arbitrarily, since here there is no natural boundary—by the modern departments of the Drôme and of the Hautes Alpes.

Hills of Every Shape and Height

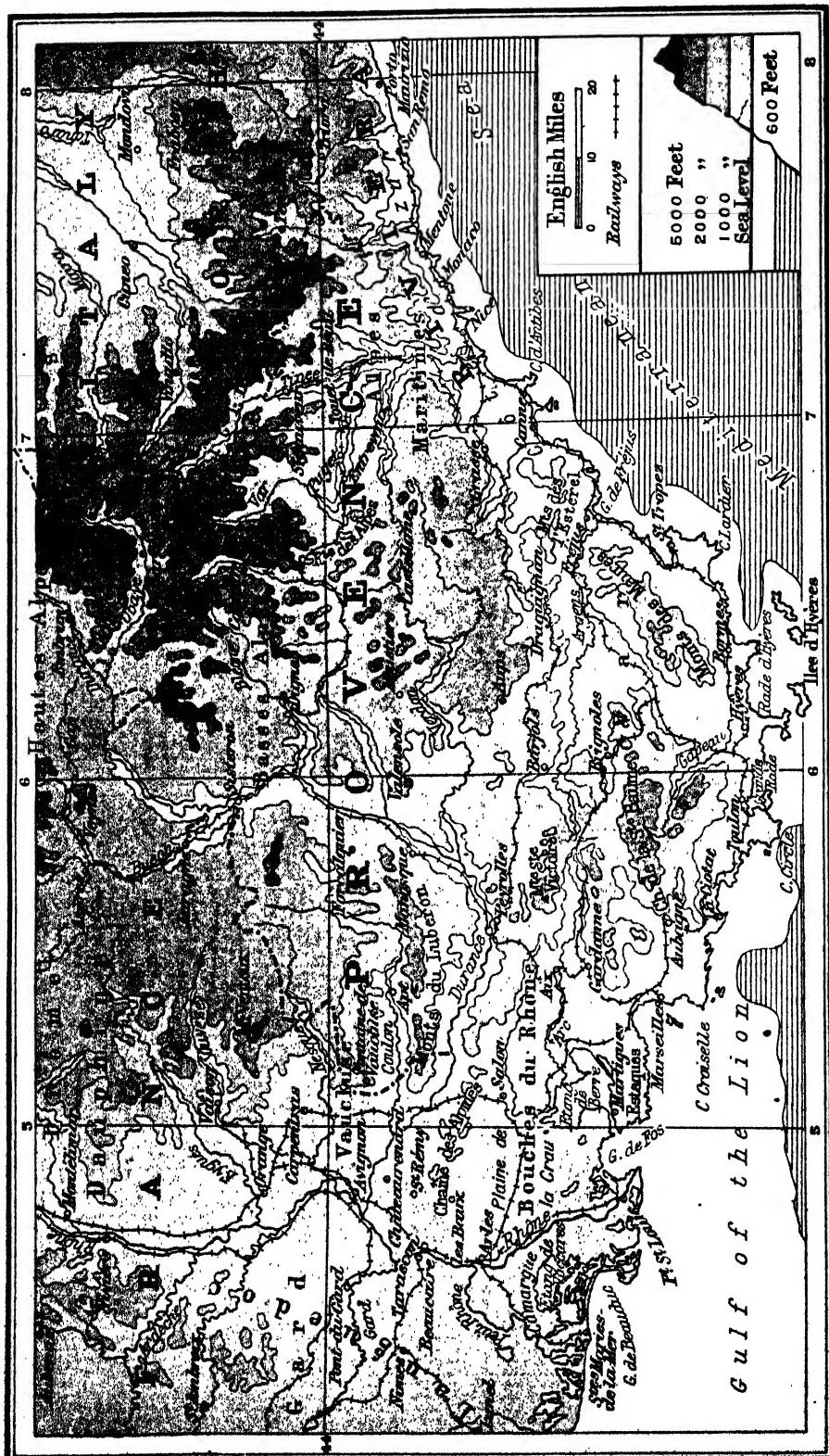
Everywhere else, except in the districts of the Crau and the Camargue, or waste delta of the Rhône, whose smooth and even spaces relieve the broken surface of the land, rise the hills, of every height from the gentle undulations in the valley of the Ouvèze, or the last thrust of the great Alps' rocky shoulders westward towards Languedoc, that historic chain of the Alpines still crowned by the ruins of Les Baux, to those enormous mountain masses of the Basses Alpes lifting their cloud-capped, snow-mantled peaks up to 10,000 feet above the level of the sea.

All this vast ocean of summits and passes may be divided, roughly speaking, into four groups—the mountains of Basse Provence, including the ranges of the Maures, Estérel, Ste. Baume, Ste. Victoire, Luberon, etc.; the heights, including Ventoux, to the north of Nice, Grasse, de Moustiers, etc., forming the first great range of the Alpine massif and rising to some 6,000 feet; the calcareous ranges farther inland, those mighty hills that rear their heads above the valleys of the Var, the Durance, the Verdon and the Bléone; and, lastly, the great crystalline range forming part of the loftiest line of the Alps—the massifs of the Alpes Maritimes and of the Ubaye, reaching a highest altitude of over 10,000 feet.

Fair Plains and Sunny Cities

Westward from the Italian frontier these mountains plunge abruptly down to the blue waters of the Mediterranean Sea, forming the Côte d'Azur, deep in whose sunny hollows lie those palatial winter cities such as Nice, Monaco, Cannes and the rest, where, after the fall, the wealthier world of northern Europe hastens in quest of warmth and pleasure. It is not until you reach the gulf of Fréjus, to the west, that low-lying land intervenes in any quantity between the mountains and the sea. Having passed the Rade and the Iles d'Hyères and Toulon, the coast-line bends north-westward to Marseilles, and the hills of Estaque screening that great salt lake, the Etang de Berre.

Here, at last, as one approaches the estuary of the Rhône, the lofty mountains recede, and there stretch away northward, past Arles and far beyond, those fertile, river-bordered plains, set



PROVENCES RISING TANGLE OF HILLS FROM THE RHONE VALLEY TO THE MARITIME ALPS

about with ancient, romantic cities, that, to many travellers who know and love them, are always the real Provence.

As one turns northward, up-stream, against the swirling current of Europe's swiftest river, there lie beyond either bank two of the plains of Provence over which, not very long ago, as geological time is counted, the Mediterranean rolled its waters, until, century by century, successive coverings of deposit from the Rhône and the Durance lifted these lands inch by inch above the waves. On the east side, between the Alpines and the Etang de Berre, is that stony, sterile plain, "Campus Lapideus" of the Romans, now known as the Plaine de la Crau, where the sheep, nosing between the pebbles for grasses, feed themselves as best they may for half the year, and the crops, on its more fertile borders, are sheltered by stout ramparts of black cypress against the turbulence of the mistral. On the other side, between the Rhône

proper and the Petit Rhône to the west, the eye can range for miles over that most curious tract of country, the delta formed by countless centuries of alluvial deposit, and known as the Camargue, a sad, alluring waste of salt pools and marshes, protected by dykes against both river and sea, and thus being won back, acre by acre, to fertility and the service of man. Farther north, on the east side of the river, extends the rich plain of Provence, on the whole the loveliest, the most fertile, and the most densely populated part of the province ever since Roman days, as the many remaining and glorious monuments of antiquity abundantly prove.

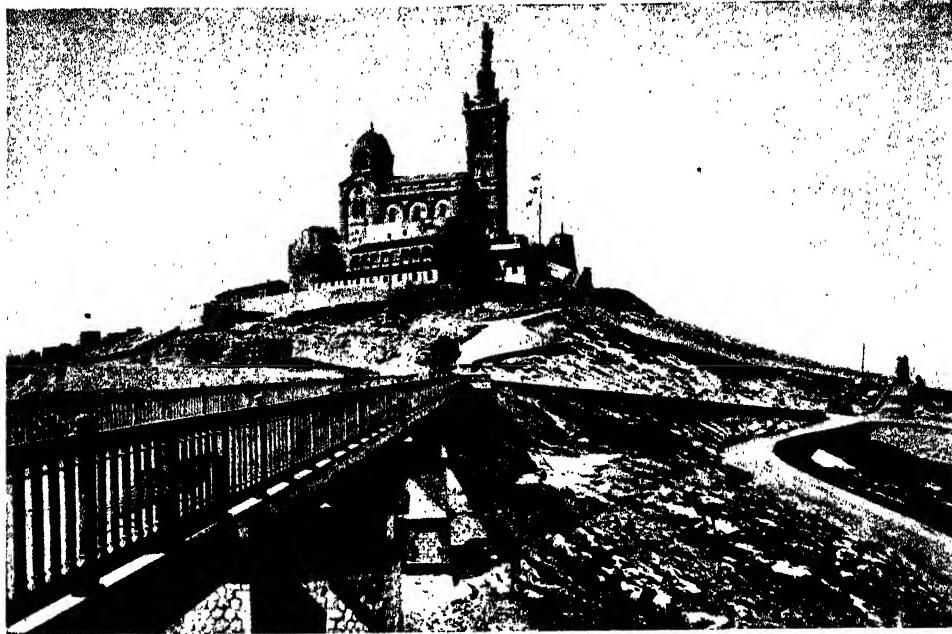
Such, briefly sketched, is this enticing land, a land of extremes, of soaring mountain and of unbroken level, of fertile plain set against blazing desert, of rivers that are alternately roaring torrents or dry beds, a land inclining to the hard in tone and light and shadow, a land of contrasts in colour



Aerofilms

MARSEILLES: AIR VIEW OF THE OLD PORT AND THE OLD TOWN

At the fortified entrance to the Old Port is the iron frame of the Transporter Bridge, while in the centre of the photograph is the hospital and farther to the right La Charité. Beyond the hospital are two parallel lines of buildings denoting the course of the Rue de la République. The Old Port is connected with the Bassin de la Joliette by a channel which passes behind Fort St. Jean



E.N.A.

CHURCH OF NOTRE DAME DE LA GARDE UPON ITS BARE HILL

South of the Old Port in Marseilles is a rugged hill upon the crest of which stands the church of Notre Dame de la Garde. The edifice is in the Byzantine style and the belfry is topped by a gigantic statue of the Virgin. The church is visited by many sailors who affix votive offering to the walls. A bridge leads to a lift from the streets below at the foot of the hill



F. Deauville Walker

CATHEDRAL AT MARSEILLES RISING BESIDE THE HARBOUR

The cathedral stands on the Quai de la Joliette, and was built during the nineteenth century of white and dark-green stone in the Byzantine style with cupola towers. The interior is ornamented with marble and mosaics. Relics of the old cathedral of S. Lazarus, occupying the site of a temple of Diana, are adjacent on the right. Close to the cathedral is the Bassin de la Joliette



Office Français du Tourisme

WARSHIPS AT ANCHOR IN THE GREAT HARBOUR OF TOULON

Toulon, the chief naval station in the south of France, is situated 42 miles east of Marseilles. The town is enclosed by hills on which are forts commanding the sheltered bay, and it has the uninteresting and rather sombre appearance that is usually associated with naval ports. A large number of the inhabitants are employed at the arsenal, dockyards and other naval establishments.



E. N. A.

LAGOONS OF THE CAMARGUE SPREAD OUT BELOW THE AEROPLANE

Between the two chief mouths of the Rhône there lies a marshy plain known as the Ile de la Camargue, which is protected from the sea and rivers by dykes, and includes many lagoons. Operations for draining and reclaiming the land are being carried out; dunes have been planted with pines and tamarisks, and in parts there are pastures on which wander half-wild sheep and cattle.

and line, as in its other aspects, with the sombre, sable black of its cypresses silhouetted against the fierce whiteness of its castle walls and winding roads, with jagged edges of hillock and of rock breaking the horizon of the plain.

Land of Legend and Old Romance

And yet, withal, a very lovely land, of gracious legend and of old romance, a land lit with an indescribable electric radiance and glory when, in spring or autumn, field and lane shine and glimmer, green with crops and jewelled with flowers, beneath a sky of gold, silver and blue. The general character of Provence is a happy blend of the "dolce-far-niente" charm of Italy with the no less admirable, if sterner, qualities of central and northern France.

The climate, throughout the greater part of the year, is a pleasant one, though it would be more so were the ranges of temperature less sudden and extreme. A Provençal winter, in general, is mild, especially in the favoured Côte d'Azur, where, screened by the mountains and open to the sea and sun, an ever-increasing host of visitors from less favoured lands seeks to forget fog, darkness and frost.

The Mistral a "Devil Unchained"

Not even Nice and Cannes, however, escape entirely that winter scourge of Provence, the mistral, or "devil unchained" of Mme. de Sévigné's phrase, which, roaring south-eastward from the Cévennes and the Alps, sweeps on its icy way over the country, sometimes for days on end, with almost incredible violence, and in spring-time would tear the very crops from the soil, were they not protected, as indeed is also the railway-line across the Crau, by artificial screens of cypress or of reed. The writer, not long ago, cycled one day from near Avignon to Marseilles without pedalling for a single mile, swept up the hills and flung across the levels by the giant strength of this tempestuous wind. With the coming of April, however, the mistral gradually abates, until by the

end of May it has spent its force. Both these months are delightful ones in Provence, and so also, quite often, is June; but with July the great heat begins, the shade temperature rises, at times, to the nineties or even higher, the pitiless sun beats down from a brazen, cloudless sky, the mosquitoes wax ever more numerous and aggressive. No rain, excepting perhaps an occasional thunderstorm, may fall for weeks, or even for months together; the crops, except where they are well irrigated, languish, parched with drought; and the roads, and roadside vegetation, suffocate beneath a pall of dust.

Refreshing Rains of Autumn

With the coming of autumn, however, the climate again becomes very pleasant; the longed-for rains fall, and mankind, with all his belongings, is refreshed. One should add that at the loftiest elevations, such as the higher-lying villages and halting places on the mountain passes of the Route des Alpes, where the road is not often free from snow before July, the climate and temperature vary swiftly, and greatly, with the altitude and the hour of the day. About the hoary crests of the more isolated and unprotected summits, such as Ventoux, north-east from Carpentras, the winds almost ceaselessly beat and howl.

A country such as this, that I have briefly sketched here, cannot be generally described as fertile. Miles and miles of the surface of Provence, the rocky slopes of the mountain ranges such as the Chaine des Maures, east of Toulon, the Estérel and many another, are covered with a sombre mantle of marine pines and firs, and with very little else; but along the sheltered bays of the Côte d'Azur the stately palm-tree, the cactus and the lemon grow in the open air, while in the alluvial plains, excepting only the salt marshes—in addition to the characteristic and ubiquitous plane-tree and cypress—the chestnut, mulberry, lime and sycamore may everywhere be seen lining the roads and

fringing the plantations of vine and olive that are the two principal sources of the country's wealth.

Of bird and animal life there is considerable variety, from the small hedge-row creatures to the great eagles of the alpine peaks—who occasionally, under stress of hunger, descend upon the plains—and the beautiful flamingoes.

white ponies, originally, no doubt, of Arab or Moorish breed, whose principal function, most efficiently performed, is to assist in driving the bulls.

The Camarguais, hereabouts, are waging a lengthy and stern, yet uniformly successful, war with nature in their efforts to drain the marshes and win over to fertility and production the



Keystone

ROMAN RUINS AT ARLES AND THE CHURCH OF S. TROPHEMUS

The old cathedral of S. Trophemus is a seventh century Romanesque church surmounted by a tower and was restored about 1870. The interior is plain, with tapestry upon the walls and a Holy Sepulchre in a chapel. In the foreground are some of the remains of a Roman theatre; but much material was taken away to be used in building churches and the cloisters of S. Trophemus

which, coming originally, it is said, from the delta of the Nile, have established themselves around the salt pools of the Camargue. A flock of these birds leaving the water, their colour changing to rosy pink as the white cloud of beating wings mounts and vanishes into the blue, is a sight as lovely as any that Europe can show.

Another, and less welcome, feathered emigrant from Africa is the "pelican," as the peasants style the Egyptian vulture; and, among the animals, one must not forget the little black bulls of the Camargue, made use of for the innocuous village bull-fights, nor the

stretches of sterile, salt-encrusted waste. In some sections of a few acres at a time these lands are being banked, inundated periodically with fresh water from the Rhône, sown with rice—a salt-absorbing plant—and so, after a dozen years or more of costly preparation, made ready to grow grapes or other valuable crop.

All along this Mediterranean coast, from the strange little semi-African village of Les-Saintes-Maries-de-la-Mer—whose fortress-church is an ancient symbol of danger from land-pirates and sea-pirates too, and whose curé, at every May-time festival, blesses the waters from the prow of a boat—from

here, right away to Mentone and the Italian frontier, a busy fishing industry is carried on; and every year, too, these coastal towns and villages supply to the French fleet a quota of recruits, who, though valuable in their degree, have never really rivalled in seamanlike qualities the more daring and hardier sailors reared in the sterner conditions of maritime life on the Breton coast.

Forestry also, on the slopes of the wooded hills, occupies a certain portion of the people; but the staple industries of Provence are the culture of the olive and the vine. The wines of south-eastern France, if not generally com-

parable—any more than are those of Algeria, upon the opposite coast—with the choicest vintages of Burgundy, Touraine or the Bordeaux district, are nevertheless in much demand, especially for “mixing”; and there is a ready sale also for the product of those soft green olive-trees, “grey-leaved and glimmering,” as Euripides wrote of them, that are so characteristic a feature of the Provençal landscapes.

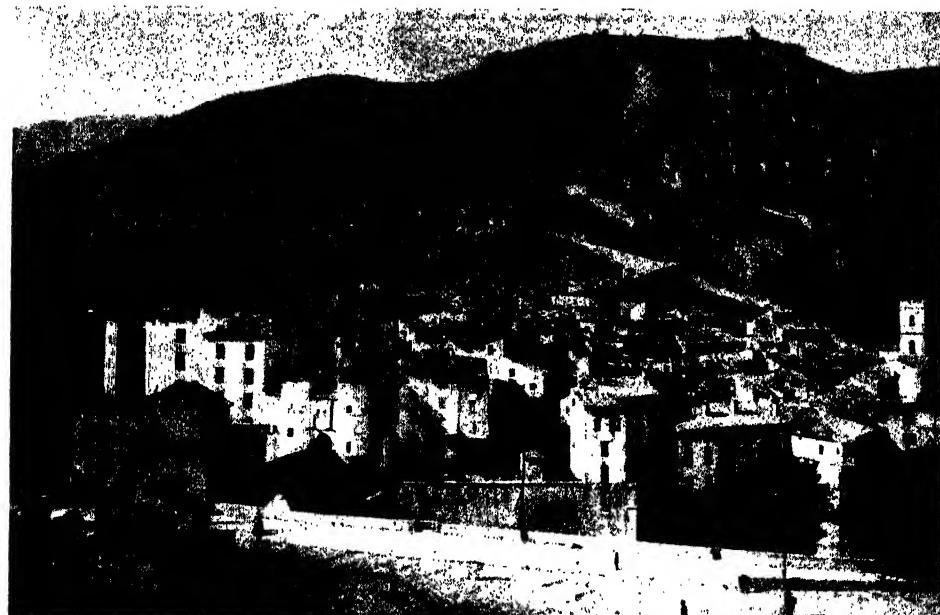
Good corn, and other crops too numerous to mention, are grown upon the fertile plain of Provence, that, starting from the hills of the Alpines, reaches away eastward beyond Carpentras and northward beyond Orange.



HOTEL DE VILLE, TARASCON, AMID NARROW, COBBLED STREETS

Office Français du Tourisme

Tarascon stands on the left bank of the Rhône about 62 miles from Marseilles. Portions of the Hôtel de Ville date from the seventeenth century, and the castle, outside the town and now used as a prison, was the residence of the rulers of Provence. A fable alleges that its name is derived from the dread Tarasque, a beast that terrorised the district in the first century A.D.



P. L. M.

ENTREVAUX ACROSS THE FORTIFIED DRAWBRIDGE

Entrevaux lies in the province of Basses-Alpes about 34 miles almost due north of Cannes. It is a strange little town which is entered by crossing a drawbridge, and has its houses crowded together within the ramparts, making the streets narrow and dark. The citadel stands on a rocky hill outside the town to which it is joined by a zigzag wall which replaces an older one.

Near Avignon, in the valley of the Durance, around Château Renard, the many artificial screens against the mistral, and the empty wicker baskets which you may see piled on a May morning before the tawny-roofed farm-houses, indicate the centre of another important industry, that of "primeurs," or early crops of potatoes and other vegetables which, growing under these favoured conditions, reach the Paris markets a month or so in advance of more northern produce.

Another industry hercabolts, and a very fascinating one, is that of silk. To see the shower of fresh-plucked mulberry leaves poured over the green silk-worms, and to hear, rising from beneath the heap, like the splash of distant rain, the rumour of their juicy feast, are pretty sights and sounds indeed. To many minds, perhaps, a yet more charming Provençal industry is that of essences and perfumes, with its headquarters at Grasse, where, every summer, hundreds of pounds of roses, orange-flowers and jasmine are pressed into

liquid fragrance. Chestnuts, upon the higher lands, provide a store of winter food, and a glance round any market place, at the right seasons, will show you how great a variety of fruits and vegetables—figs, melons, truffles, tomatoes and many others—this land, under favourable conditions, can provide. Another lucrative and useful occupation in Provence is that of catering for the needs of visitors. The luxurious palace-hotels of Nice, Cannes, Monaco and other towns upon the Riviera are run with an efficiency and a regard for comfort unsurpassed, I suppose, by any other such undertakings.

With every year the constantly improving services of motor-bus and char à-banc along the public roads are making more easily accessible almost every corner of the province, and are linking up the towns and villages. Throughout the spring and summer the Paris, Lyons and Mediterranean Railway Company (the P.L.M.); whose main line from Paris passes through Orange, Avignon and Arles to

Marseilles, Toulon and the cities of the Côte d'Azur, runs also a service of automobile circuits, radiating from Avignon; and from July onwards, as soon as the snow is off the passes, the same company runs also another service of cars, along that great triumph of modern civil engineering, the "Route des Alpes et du Jura" from Nice to

better service of mankind this hitherto most undisciplined river of France.

Marseilles (Massalia), with its population of over 600,000, is at once the most ancient and most important of French ports, owing its great prosperity to a convenient position, near the mouth of the Rhône, in the direct line of communication between the North



P. L. M.

TOUET-DE-BEUIL HIDDEN IN THE NARROW VALLEY OF THE VAR

Touet-de-Beuil is a small village on the Var about 30 miles by rail from Nice. The houses appear to have obtained a precarious foothold on the steep side of the valley, and the roofs of some dwellings seem to grow out of the hillside behind them while the façades of others overhang fields and the cottages that lie closer to the twisting road many feet below.

Évian and from Geneva to Belfort, thus connecting the winter cities of the French Riviera with the autumn resorts of the Lake of Geneva and with the provinces of Alsace and Lorraine.

From the great Provençal port of Marseilles there is steamer service with almost every part of the world, and the completion of the canal from Marseilles to the Rhône, by way of the Etang de Berre, is designed still further to increase the city's commercial importance and should, one day, be linked up effectively with a much larger undertaking, the projected Rhône canal, by which it is proposed to harness and bring to the

Sea and the Mediterranean. The industry of this beautiful city is enormous; its great mechanical workshops, including those of the Société du Creusot, the P.L.M. Railway and many another, just hum, all day long, with intense activity, and in the harbour, where West and East very strangely and picturesquely meet and mingle, you may see the shipping and the costumes and hear the languages of almost every important nation of the world.

What Marseilles, among French ports, is in the world of commerce, such also is Toulon in military and naval circles. Situate in a beautiful and sheltered bay,

at the southern extremity of France, this is the headquarters and victualling centre of the Mediterranean squadron.

The remains of classical and medieval art in and around the places just named, and at Nîmes—though this last, strictly speaking, is outside the limits of Provence—are historically, as well as architecturally, one of the most characteristic features of the country. The amphitheatre at Nîmes, and the great aqueduct, or “Pont du Gard,” are two of the best preserved and most majestic monuments that the might of Rome has left to us; the arena at Arles is little inferior to these; the triumphal arches of Orange, Carpentras and St. Rémy are of great beauty and interest; while those splendid examples of Greco-Roman play houses, the antique theatres of Orange, Aries and Vaison, attest the splendour of Provençal cities under Roman rule.

Taken altogether, these picturesque cities of old Provence, with their Greco-Roman monuments, their medieval churches, their courtyards and palaces of the Renaissance, their quiet squares, their plane-tree shaded quays and promenades—as at Beaucaire—their ruined castles built upon every coign of vantage, are among the most romantic and alluring in the world. From the point of view of modernity, however, in such matters as hygiene and sanitation, though fast being brought into line with twentieth century ideas, they still leave something to be

desired; and a stroll through some of the remoter villages conveys an impression, not far from the truth, that much of the scavenging is still being done by the dogs and the cats.

As for the people generally, while living, for the most part, an open-air life in a warm, bright climate, they are, naturally enough, rather less industrious than the inhabitants of northern France, and have been described to me, by one of themselves, as “lizards who love to lie in the sun.” This description, no doubt, is partly true; yet only a little way beneath that climatic nonchalance and indolence there lies, hidden in this race, a dormant intellectual power, a virile force of character and a fiery exuberance, easily visible and audible at any café-table conversation and exemplified, in history, by such a man as Mirabeau, of French Revolution fame, a native of Aix.

Poets, story-tellers and fanciful and imaginative writers, such a land as this has, of course, produced abundantly from the times of the troubadours to those of Alphonse Daudet, and of my old friend, Frédéric Mistral. Even to this day the briefest inspection of the women’s faces, in the streets of Arles and of St. Rémy, and a glance at some of the natives of the Camargue or of the Mediterranean littoral, will recall, to any close observer, the classical dignity and beauty of ancient Greece and Rome to which this romantic land owes always so very much of its best.

PROVENCE : GEOGRAPHICAL SUMMARY

Natural Division. West, the alluvial flats at the mouth of the Rhône; east, the foothills and western peaks of the Alps; south, the coast of the Mediterranean. (Cf. Riviera.) A provincial unit of S.E. France, in contrast with Brittany.

Climate and Vegetation. Mediterranean in type; winter rains and summer droughts. Chestnuts. Scanty pasture for goats and sheep. Maquis. The mistral is a severe wind from the north-west in spring.

Products. Olives, olive oil. Mulberry leaves; silkworms; silk. Fruit. Early vegetables. Perfumes. Fish.

Communications. The natural outlet of the historic route of the Rhône Valley.

The P.L.M. railway. The Route des Alpes. Naval centre at Toulon. (Cf. Brest in Brittany.) France’s chief port Marseilles. (Cf. Liverpool and Genoa.)

Outlook. Resembling the Bretons, probably in origin, certainly in location, on the confines of France, where that land impinges upon other civilizations, the Provençal wrings an existence from a difficult terrain and from the sea, owes much to tourists, and has an historic past in relation to the terminus of an historic passage way. The future lies in imitation of the Swiss and the North Italians in utilising the “white coal” of this mountainous land.

E. N. A.

FORTIFIED BRIDGE AT ATTOK BELOW THE JUNCTION OF THE KABUL AND INDUS RIVERS

On the left, above the bridge, the Kabul emerges from the foothills and joins the Indus, which makes a sweep round the town and fort of Attok. In 1883 the iron girder bridge was opened to carry the North-Western Railway from Lahore and Rawalpindi to Peshawar, thus forging a strategic link between the great military stations of the Punjab and that watching the Khyber Pass. There are fortified gateways at either end, garrisoned by troops from Attok. The rails run along the top of the girders and underneath is a roadway for foot and wheeled traffic. The piers are protected owing to the terrific floods of the Indus



PUNJAB & N.W. FRONTIER PROVINCE

The Land of the Five Rivers

by Sir Thomas Holdich

Author of "The Gates of India"

THE Punjab, land of the five rivers, Jhelum, Chenab, Ravi, Sutlej and Beas, is the triangular region between the Indus and the Sutlej, including a width of the Himalayan foothills on the north within which are some of the most popular "hill" stations of India: Murree, Dalhousie, Dharamsala and Simla.

The political division, or "Province," includes, besides the five river basins, a wide tract of country east of the Sutlej reaching to the Jumna, the great partition land between the Indus and the Ganges basin, and here are such important cities of the plains as Jullunder, Ludhiana, Amritsar and Delhi, with a teeming Indo-Aryan population of Jats, Rajputs and Gujjars.

Delhi (new and old) lies towards the southern extremity of the province near the Jumna and not far from that historic field of Panipat, where the destinies of India have been so often changed in the past—and may be changed again.

Summer Capital of India

About one-fourth of the total area of the province consists of feudatory states (usually called "Native" States), self-governed, but not aloof from British supervision. Chief of them is Patiala, which reaches almost from Rajputana to the Simla hills, Simla itself being the centre of a group of small native states and hardly within sight of British territory. Simla is badly adapted to its elevated position, being scattered along the backs of a small system of ridges flanked by deep, unwholesome valleys—by no means an ideal summer capital for the government of India.

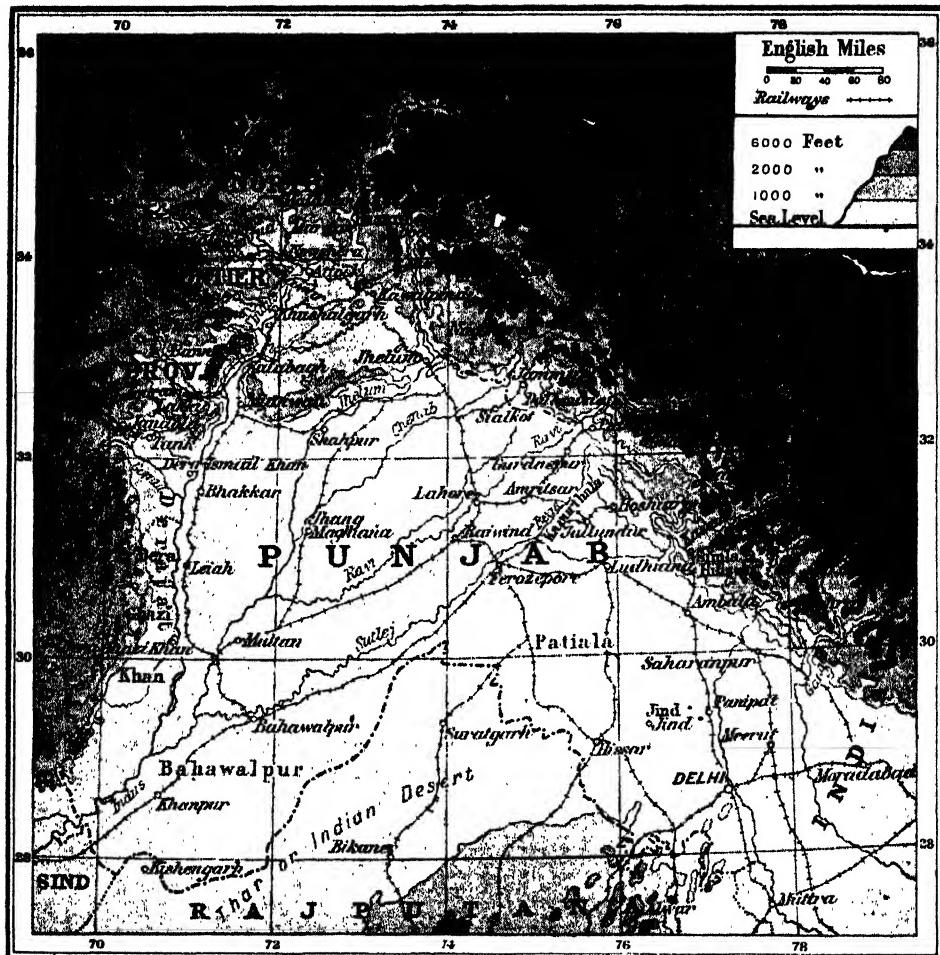
Kapurthala and Jind are comparatively small native states of the Punjab. Bahawalpur, by far the largest, stretches its huge sun-blistered length along the left banks of the Sutlej and Indus for 270 miles with 100 miles of depth, mostly sand. Irrigation has done much for agricultural interests in Bahawalpur, but it still spreads out an enormous area of unproductive land towards Rajputana and the desert. Politically, it is unimportant compared to Patiala or even to Kapurthala, whose enterprising chiefs have identified themselves in a peculiar degree with British interests both social and political.

Alluvium of Tremendous Depth

Travelling southwards from the tree-clad Himalayan foothills into the plains of the Punjab the aspect of the country gradually changes into that of a vast extent of almost treeless, grey landscape, losing itself in the shimmering dust-laden haze of the south.

Between the boundaries of the five rivers the flat-surfaced alluvium of the Indo-Gangetic plains determines the character of the landscape. This alluvium is of enormous depth. Near Calcutta it has been bored to a depth of 400 feet before meeting with fresh water shells, and at Lucknow 1,000 feet of boring only revealed a coarse substratum of sand. A sandy micaceous or calcareous clay is the prevailing material and beneath the older deposits are found the nodular segregations of carbonate of lime called kunkur, the most valuable material in all India for road-making.

Where the surface of these flat beds in the Punjab is smoothed out into glassy



PLAINS THAT GUARD INDIA'S WESTERN GATEWAYS

shimmering sheets, the surface of which vividly reflects the sun's rays and becomes intensely slippery after rain, it goes by the name of "putt" locally, and supports but a scanty scrub vegetation (among which a wild caper is predominant) not unwholesome for camels, which are bred in some districts.

No part of the Indus valley is subject to regular rainfall. From four to eight inches in Sind increases slightly towards Lahore. Such scattered groups of trees as exist are chiefly due to the increase of irrigation, which has already worked a marvel of regeneration in the economic value of the Punjab as a wheat and cotton growing country.

The amount of wheat exported varies considerably with good or bad years,

much of it being retained in the country if there is any threat of famine. In 1903-4 no less than 26,000,000 cwt. were exported from northern India (apart from the United Provinces), while the export in 1923 amounted to 10,000,000 cwt. only. There are 13,600 square miles of wheat cultivation in the Punjab and Frontier Provinces.

East of the Sutlej the provincial area is a green expanse of unending rural cultivation with flourishing villages. Here may be found most of the characteristic trees and fruits of India—dark groves of mango and the welcome shade of the banyan, the sacred pipal and the tamarind; sirrus and shisham line the roads and sal (*Shorea robusta*) is not wanting. Among the fruits are

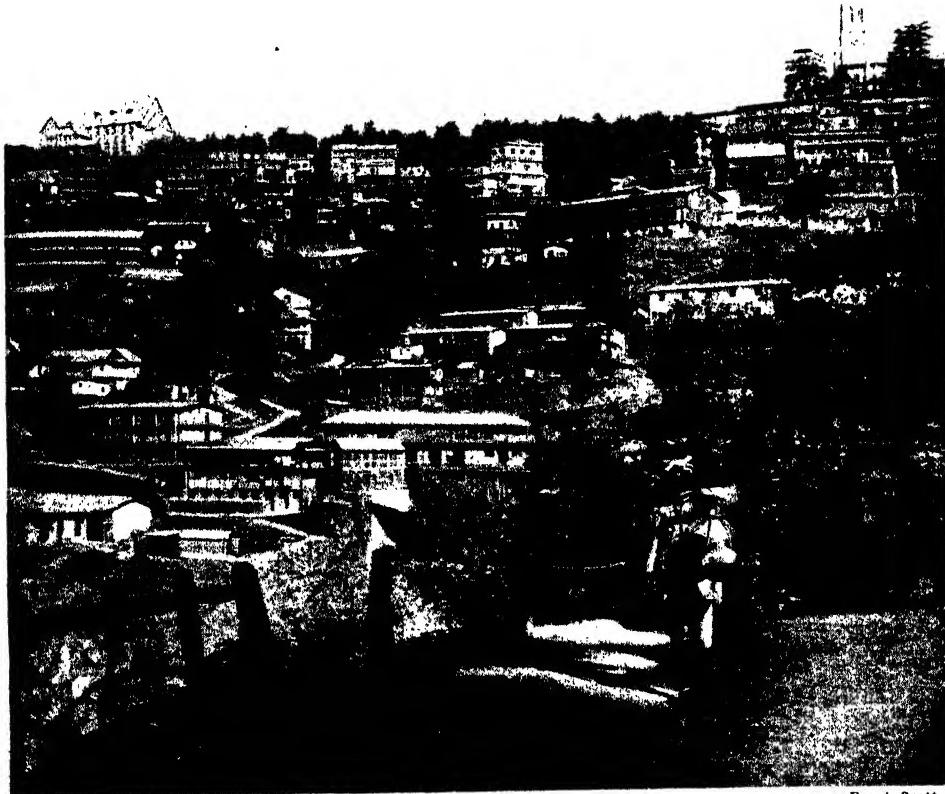
the guava, custard apple and loquat. Gardens everywhere are gay with most of the well known flowers of Europe and verandas are buried in climbing roses or bougainvillea.

Of all the rivers of the Punjab the Indus is the most important, with its 1,800 miles of length. Born in the Tibetan highlands it is a mountain river till it leaves the Himalayas and even then does not finally part with its rock-bound character. It swirls past Attock in deep black rifts and clefts and makes a more placid way through the Salt Range ere it assumes the open character of a river of the plains. Always within sight of the frontier hills, it flows through frequent sand wastes, often spreading

out into a broad network of shifting channels and raising its own alluvial bed until it takes up the volume of the five other rivers, united in the Sutlej, some 80 miles from the Sind frontier.

The process of building up its own mighty aqueduct is a constant menace of floods to the flat country it passes through in its lower reaches, especially in Sind, where the river level is 80 or 90 feet above the level of the plain. The instability of its shifting banks and the constant change of channel is also a perpetual danger to those frontier towns which, like Dera Ghazi Khan, have been built too near it.

Of the living rivers of the Punjab the Sutlej contributes most to the Indus.



Frank Scott

BUILDINGS OF SIMLA UPON A SPUR OF THE MIGHTY HIMALAYAS

Simla lies 170 miles north of Delhi at an elevation of 7,000 feet, and is the hot weather capital of India and the Punjab. The town lies on the trade route to Tibet, and has a permanent population of about 15,000, which is nearly trebled in the summer. On the right of the photograph is Christ Church, the station church, and on the left is the town-hall.

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R. F. Evans

GUARDED JIRGA OF MAHSUD CHIEFS OUTSIDE KANIGURAM, THE CAPITAL OF THE MAHSUD COUNTRY

In the mass of hills and mountains that make up South Waziristan live the Mahsuds, the most troublesome and treacherous of all the frontier tribes. Their capital, Kaniguram, lies nearly 40 miles to the west of Jandol, the nearest British fort in the North-West Frontier Province. The town has a population of between four and six hundred, and consists of the usual flat-roofed mud houses, interspersed here and there by the square towers of the chiefs. A jirga is a conference to discuss terms of peace, and is guarded so as to ensure that the British officers shall not be stabbed by some paradise-seeking Mahsud.



S. P. Evans

BUSH-COVERED HILLS BESIDE THE STONY BED OF THE TANK-I-ZAM AT PIAZHA RAGZHA

Piazha Ragzha is a military post in the Mahsud country on the road to Kaniguram. Except for the tracks across the mountains which are impracticable for all save the tribesmen themselves, the only road in this vast maze of valleys and heights is the bed of the Tank-i-Zam, which flows out into the Derajat not far from the town of Tank. Metalled roads are being constructed by the Indian government in tribal territory to connect the various camps in order to facilitate the pacification of the Mahsuds. In the distance is the white cone of Pir Gul, 12,000 feet high, upon which is a famous shrine.

Like the Indus it is mountain bred, rising at the foot of the Kailasa (Siva's paradise) and living a turbulent life of perpetual cataract in the gloom of deep mountain troughs till it finds a placid outlet into the plains. The characteristics of all these rivers are much the same as they wind through the flat regions of intermittent waste.

Indus Scenery in Hot Weather

In the cold weather the Indus is quite attractive with the constant passing of clumsy, high-sterned river boats, the sound of cries from the boatmen, and the gabbling notes of wild fowl hosts as they settle on the sand banks. Flocks of sand grouse pass southwards and orderly ranks of geese and kulan make patterns against the sky. In the hot weather the picture varies. A drab haze-bred monotony broods over the wide flat bed of the river under a brazen sky; the trampled end of the straw-covered track where it reaches the bank, cracked and split with the heat which has dried stiff the broken reed grass, the occasional glint of the snaky twists of small channels still carrying their mud coloured contributions southward, all combine to render the memory of hot weather travel near the Indus ineffaceably hideous.

Strategic Railway that Pays

But there is not much temptation to make hot weather journeys there now. The railway system is fairly complete in the Indus valley, which is permeated by one great system—i.e., the North-Western Railway, which began its existence as the Sind, Punjab and Delhi line and originally extended from Delhi to Lahore and Multan, and from Karachi to Kotri. It now includes the line from Kotri to Multan, the Southern Punjab Railway, as well as those owned by Patiala and other native states.

It taps the wheat and cotton growing districts, links up with all the more important towns by branch lines and forms the great strategic system of the Frontier. In spite of complaints that

certain long strategic links severely handicap its paying capacity, it is quite the most important and one of the best paying systems of modern India.

The canal and colonisation schemes of the Punjab have given immense impetus to its traffic and it has steadily paid out profits since 1904. The chief traffic is in wheat and seeds besides salt, coal, cotton, timber and wool. The seaport is Karachi, and its 4,500 miles of track (of which only a few hundred are double) is hardly equal to the traffic.

East of the Sutlej the Punjab between Delhi and Amritsar is well covered with railway communications. From Attock to Peshawar, Jamrud and the advanced Khyber post at Landi Kotal the line is nearly complete. Farther south at the Khushalgarh crossing of the Indus the railway has been carried to Kohat and westwards to Thal through the Hangu valley. From Thal a good motor road now runs to Parachinar, an advanced post on the Kurram route to Kabul.

The City of Dreadful Night

Farther south again from Kalabagh, where there is a ferry just south of the Salt Range, a narrow gauge line supplemented by good motor roads connects that picturesque salt-built village with Lakki, Bannu and Tank. It is carried on to the frontier at Murteza. From Tank to Dera Ismail Khan there is a tram line and a motor road.

Roads are also being developed in Waziristan rapidly. While on the subject of railways in India a word must be said for the comfort, if not luxury, of travel on Indian lines, which is certainly greater than that experienced in most parts of the world.

Although the rainfall is so scanty as a rule, yet a maximum in the north of the province has been registered at 126 inches, with a corresponding minimum of six inches at Multan. There are great extremes of heat and cold; 128° F. has been recorded as the shade temperature at Multan, while at Lahore (the "city of dreadful night") the



John Bushby

WIDE BAZAAR WITHIN THE WALLED NATIVE CITY OF LAHORE

Lahore, the capital of the Punjab, is situated almost midway between Delhi and Peshawar. The native city, lying about three miles north-west of the cantonment at Mian Mir, is walled, and in it can be seen representatives of almost every race and creed in Asia. It is not advisable for Europeans to enter the native city as it is the source of much anti-British agitation and propaganda.

thermometer has been known to sink to 17° F. in the early morning on the grass. Such changes no doubt affect European constitutions, but much is forgiven for the sake of the long cold weather which puts life and strength into the weary alien.

When spring comes along and the world is gay with the blossoms of fruit trees and flowers; when the early morning rides are sweet with the scent of the yellow blossoms of the wattle and the air is clear and bracing, then there is real joy in north Indian life. Then the three or four months of sweating

horror when birds go about with open beaks gasping for air, and the atmosphere of the Kacheri (courthouse) is as thick with the odour of sticky humanity as it is with human lies, are forgotten.

Where the Punjab reaches into the hills there is much variety of vegetation and wild flower growth. On the Himalayan foothills are found the deodar and the chil (*Pinus longifolia*) and, in the plains below, the shisham, the sal and some acacias.

Peshawar is delightfully laid out with beautiful gardens, and there is not one of the chief cities and

cantonments of the Punjab that does not boast of well-kept public gardens. Lahore, Rawalpindi, Amritsar (the Sikh capital), Ambala, Delhi and Multan have all the attraction which careful floral culture can give them, combined with such Indian shade trees as are suitable to their varying climates.

Arts and Crafts of the Punjab

European fruit is seldom cultivated with much success south of the Himalayas. Even the ubiquitous mulberry of the Frontier is but a poor imitation of its European relation, although it is of immense importance as foodstuff.

Of the arts and crafts the Punjab boasts its own distinctive variety. Visitors who load themselves with the pottery of Multan and Peshawar merely serve to keep a degenerate art alive and make it pay. The original blue and white tile work of Multan was no doubt the progenitor of the crude colouring and generally shapeless designs of the present day, while the imitation majolica of Peshawar is hardly worthy of the craftsmanship wasted on it.

But there is no lack of artistic merit in the Punjab. The inlaid metal work (*kuft-kari*) of Lahore and the inlaid ivory of Hoshiarpur are of great artistic value, as is the enamel work of Delhi. Wood carving attains a high degree of excellence in many of the Punjab cities, notably in Sialkot and Hoshiarpur. Calico printing and cloth weaving are carried to great perfection in the northern towns and across the Indus at Kohat and the decorations of silk and cotton cloth are often very beautiful in design and effect. Gold is woven into coloured silk and the "lungis" of Peshawar and Kohat are justly famous.

Inexhaustible Salt-Mines

The salt industry of the Punjab is confined to mining in the Salt Range between the Indus and the Jhelum, where salt is found associated with the oldest fossiliferous strata in India. Salt has been excavated there for centuries but seems to be inexhaustible.

A detailed description of the form and character of the principal towns and cities of the Punjab and Frontier is impossible, but there are some features in which they all agree. The native city (often wall-enclosed) where are the principal bazaars, and where one meets crowded representatives of many Asiatic races, are always at some distance from the cantonment, or station, where the civil and military authorities reside. In the city the streets are invariably narrow and irregular, but as a rule they are fairly clean, and the civic authorities do their duty well. Men are not permitted to go about armed, and those arriving from across the border have to give up their arms until they recross.

Stroll through a Native City

Full of colour and movement, backed by the open shop fronts which make a full display of attractive Oriental wares, or, maybe, of fruit and most unattractive sweets, a stroll through the city is always fascinating but not always safe. It is just as well to be mounted. The cantonments with their wide and shady roads, spacious compounds surrounding cool, comfortable houses and public gardens, which give so great an impulse to social gatherings, make life not only possible but delightful for most months of the year. Life in the northern stations of the Punjab is quite well worth living.

The administrative province of the Punjab includes little west of the Indus besides the Derajat (the Dera Ghazi Khan district) and the salt regions about Kalabagh. The trans-Indus plains generally skirting the frontier hills are under the chief commissioner of the North-West Frontier Province, who also throws a veil of shadowy authority over the rugged frontier mountains and the wild and unruly tribes of brigands who inhabit them.

These tribes are many, and do not differ greatly from each other in mind or morals. But fortunately they can seldom combine; on the contrary, feuds between them are fierce and constant,



E. N. A.

DALHOUSIE AMID THE WOODED FOOTHILLS OF THE HIMALAYAS

Dalhousie is a beautiful little hill station and sanatorium situated at an elevation of over 7,000 feet in the hill state of Chamba. The nearest railway station is at Pathankot, 52 miles distant, but half the journey can be covered by motor. A few miles from the town is the "Marg," a circle of perfect lawns, with a lake in the centre and surrounded by magnificent forests of cedars



SERPENTINE TRACK OF THE HILL RAILWAY FROM KALKA TO SIMLA—

At Kalka the broad gauge railway from Ambala ends, and the narrow gauge mountain line to Simla commences. The latter follows the course of the old tonga or carriage road for the greater part of the way, and has an average gradient of 1 in 33, with 103 tunnels. The time taken for the upward journey is about seven hours and for the return one hour less. It has been proposed to electrify the line.

They figure on our maps as "independent," which indeed they are, although they all look to the land of their co-religionists (Afghanistan) as their final refuge in times of trouble.

The thorny problem of frontier administration extends north of Peshawar to Chitral and Kashmir, and southward to the edges of Baluchistan. The most northerly station of the Frontier Province is Malakand, which dominates the Swat valley, and is now in easy connexion with Peshawar by means of the railway extension from Nowshera (on the Kabul river) half-way between Attock and Peshawar, which bridges over the dreary expanse of plain in which Mardan is situated.

The attractive little station of Abbottabad, sacred to the Gurkhas, which is

also well up in the north, holds the key of the wild Hazara district east of the Indus, and points a forbidden way into Kashmir by the Kagan valley.

Peshawar, the headquarters of the province, lies south of the Kabul river, and dominates one of the historic gateways of India, so far as it commands the Khyber outlet from Afghanistan. The Khyber is a route to Kabul developed by British enterprise. The ancient routes which, times untold, have been followed by Aryans, Greeks, Mongols, Scythians and Asiatic invaders generally, ran north of the Kabul river and crossed the Indus north of Attock.

From Peshawar southwards through the length of the province to Dera Ismail Khan there runs a first-class road linking the frontier stations to



E. N. A.

—CLIMBING FROM THE SCORCHING HEAT OF THE DISTANT PLAINS

The first station is Kasauli on the summit of a hill which overlooks the Kalka valley. The principal Pasteur Institute in India is situated here, together with the Research Institute. Beyond Kuniharatti the line passes under the Barogh ridge by the Barogh tunnel, 3,750 feet long, and looks down into the Giri valley. Higher up, near Jutogh, the train threads through beautiful woods of pines and rhododendrons

each other, each station being now connected with the North-Western Railway east of the Indus by bridges when necessary and local branch lines. The extension westwards from Kohat to Thal places the Kurram route to Kabul on a strategic level with the Khyber, both being in direct railway touch with Rawalpindi. This doubtless is a great strategic advantage, which has the further useful effect of promoting trade facilities between Afghanistan and India.

It is just here, between Peshawar and Kohat, that there exists the greatest fault in the scientific alinement of the frontier between British India and the independent tribes, for here there extends across the North-West Frontier Province a broad band of rough hill country, reaching to the Indus, which

affords an excellent opportunity for the gathering of the clans when intent on mischief, either in the direction of Peshawar or Kohat. Across this runs the direct and only road between the two stations. The highest point of the pass overlooks Kohat, and although it is held as a military post, there are times when it is practically closed to travellers. From the pass there are tracks well known to marauders into Afridi territory.

The independent tribes facing the northern section of the Province are the Swatis (Yusufzais) and Mohmands (both peoples claiming direct affinity with the Afghans) and the Afridis south of the Khyber and north-west of Kohat. There are others flanking the Afridis, but these are the most important tribes



John Bushby

PESHAWAR, THE CAPITAL OF THE NORTH-WEST FRONTIER PROVINCE

Peshawar is located near the left bank of the Bara river 11 miles from the mouth of the Khyber Pass, and was a Buddhist capital in the second century. There is only one fairly wide street in the city, the Kissa Kahani, which starts at the Kabul Gate. Caravans come to the city annually from Kabul, Bokhara and Samarkand, bringing horses, fruit, silks, dyes, carpets and woollen goods

and give most trouble. The Afridis are not Afghan. They held their hills long before the modern Afghan existed in his present form, and were known to geographers in the days of Herodotus.

The Afridi clans (or Khels) are many and truculent and they once gathered around their "Holy of Holies"—the Tirah Maidan—in the full assurance that no one could reach them, until in 1898 the veil was lifted by a notable military expedition. The Tirah Maidan is a terraced amphitheatre set amidst pine clad hills. The delightfully picturesque villages, each with a central tower, perched on the terraces are surrounded with orchards of apricot and magnificent walnut-trees. The Maidan is a veritable oasis in the midst of a savage mountain wilderness.

There are points about all these Pathan peoples that are almost irresistibly attractive in spite of the relentless savagery of their blood feuds and their thieving and lying propensities. They possessed a code of chivalry from which they have only lately learned to depart. They made no war on women and children and the episodes of kidnapping and murdering British ladies

are new and most significant. It may possibly be their reply to the dropping of bombs on their villages when their own women and children have suffered.

A great change has been effected in the military position on the Frontier during the first twenty-five years of this century. The British have a far better knowledge of independent tribal country and customs, with a far greater command of the mountain fastnesses due to the introduction of the aeroplane and the making of roads. On the other hand, it is certain that the tribes are now sufficiently well armed to be able to put 50,000 effective rifles into the field should they be able to combine.

The best of their arms have reached them through the Persian Gulf. This has been chiefly a lucrative British industry, but other nations have competed. Kabul and, it is said, Jalalabad both possess efficient arsenals and the means for turning out small arms.

The Kurram valley offers the next approach to Kabul south of the Khyber from which it is separated by the remarkable straight-backed range of the Safed Koh, which imposes an impassable barrier between them.

Parachinar is the most advanced post on the Kurram line. Below the Kurram are scattered a few unimportant tribes till we touch the Tochi valley and the route to Ghazni in Afghanistan.

The Tochi and the Gomal rivers define the two main routes to the Ghazni uplands. Here we encounter the Wazirs of Waziristan, which country includes a mass of mountains of irregular formation between the two rivers. The northern Wazirs—they of the Tochi valley—the Dawaris, are beneath contempt. They are regarded as the jackals of the Frontier by the other Wazir clans; but spread over the Waziri hills the Mahsuds (who gave as much trouble as all the rest of the Pathans together) are certainly not to be classed with them. There is a rough sense of dignity and honour about the Mahsuds which the Dawaris lack.

I have been over the Waziri hills, climbed their highest peaks and looked into their rugged valleys and deep gorges with amazement at their combined beauty and savagery. Apart from the opportunities and facilities afforded by military expeditions, I owed much to the good will and loyalty of a gigantic Waziri chief in getting that troublesome country mapped. His word was his bond. Many a tale of blood feuds among this people could be told.

The Waziri mountains which run to one or two prominent peaks are permeated by certain delightful valleys

dividing their higher spurs. Green glades and gentle slopes are dotted with a sprinkling of spreading poplar trees which grow to a gigantic size, and the mountain oak, which in its young days so nearly resembles holly, is frequent enough to afford excellent cover for sharpshooters. Willows fringe the streams and on the western side of Waziristan, north of Wana, there are park-like stretches of country with clumps of deodar scattered amongst the green.

The limestone hills of Waziristan assume the most amazing shades of blue and purple seamed with white streaks of mountain torrents. Kani-guram and Makin are the principal villages of the Mahsud country, but they are at best little more than a collection of mud huts. Iron is smelted and fairly good weapons are forged at Makin. The ordinary village industries of weaving and pottery-making supply the Wazirs with all they want beyond the habitual acquisitions resulting from raids into the plains.

A road from Jandola in the Bhitanni country north-west of Tank to Razmak in Waziristan, which is carried on to the Tochi valley, is completed; and it will probably be continued south from Razmak to Wana and the Gomul.

Where the Gomul river rounds off Waziristan Baluchistan begins, and with Baluchistan quite a different sort of frontier geographically and politically.

PUNJAB: GEOGRAPHICAL SUMMARY

Natural Division. Western section of the Indo-Gangetic plain, the alluvium filled trough at the base of the Himalayas. (Cf. India Central, Bengal.) The middle Indus and the lower portion of the valleys of the five rivers which join to flow into the Indus, as the Sutlej.

Climate. Monsoon rains, with intense muggy heat from June to September. May-June hottest months, succeeding the intense heat of the dry early summer. January-March westerly winds and rains with cyclonic storms. (Cf. Mediterranean climate north of the Sahara.) November rainless, cool and pleasant. Southern edge near the Thar desert. Monsoon winds come from the east, so that the rainiest area lies between Delhi and Lahore.

Vegetation. On the plain, hot desert, drought-resisting scrub jungle; a loamy soil responds with heavy yields of wheat and native grains whenever water is supplied from the irrigation canals, which depend upon the water from the five rivers. Mediterranean type flora on the Salt Range and plains of the north-west. Pines, deodars, firs and other trees on the Himalayas.

Products. Wheat, maize, bajra (a native grain), oil seeds, hill-rice, cotton.

Communications. Rivers, railways and roads.

Outlook. The future rests with increasing supplies of irrigation water from the five rivers, which are tapped by government inundation and perennial canals.



SEA

"Canada"

H.M.S. HOOD IN THE ST. LAWRENCE PAYS A TRIBUTE TO QUEBEC'S ACCESSIBILITY FROM THE SEA

This splendid photograph shows how the city stands up above the river, the cliffs rising almost sheer to the citadel on the extreme left, with a more gentle slope beneath the great tower of the Château Frontenac in the centre. To the right of this is the Post Office, while the spired building on the right again is the famous Laval University. It was farther up the river to the left that Wolfe made his landing from boats rowed to the shore below the heights of Abraham, which are out of sight. Here H.M.S. Hood reminds one that it was the Navy which made that famous landing possible.

QUEBEC

City of Old France in the New World

by Beckles Willson

Author of "The Romance of Canada"

REARED aloft on its impregnable heights, the very aspect of Quebec seems to confirm the romance of its history. Yet at first this huge, vague mass uprising, Gibraltar-like, from the wide river offers few or no details which the eye of the spectator may instantly note. It seems less a city than an intricate fortification crowned by battlements.

But slowly, with scrutiny, the details emerge, and the multitudinous buildings detach themselves from rampart and bastion as the latter become separated from the shelving rock of Cape Diamond. There is the shadowy but stately mass of houses close to the base of the promontory, climbing slowly, wherever the rock offers a perch-hold, up the slope of Mountain Hill, past the angle of the Grand Battery and ever higher to the famous Citadel. One identifies by degrees the pile of monumental buildings—Laval University, the Hôtel Dieu, the Seminary, the Basilica, the Court House, Dufferin Terrace, and the resplendent Château Frontenac beyond.

Charming Anachronisms

Although the city has an increasing population of about 100,000, the Quebec of to-day is essentially the Quebec of the conquest. It still retains much of its ancient French tradition. The architecture is French. If vandal hand or stern necessity has destroyed many of the old buildings the new ones are built in the style of the old.

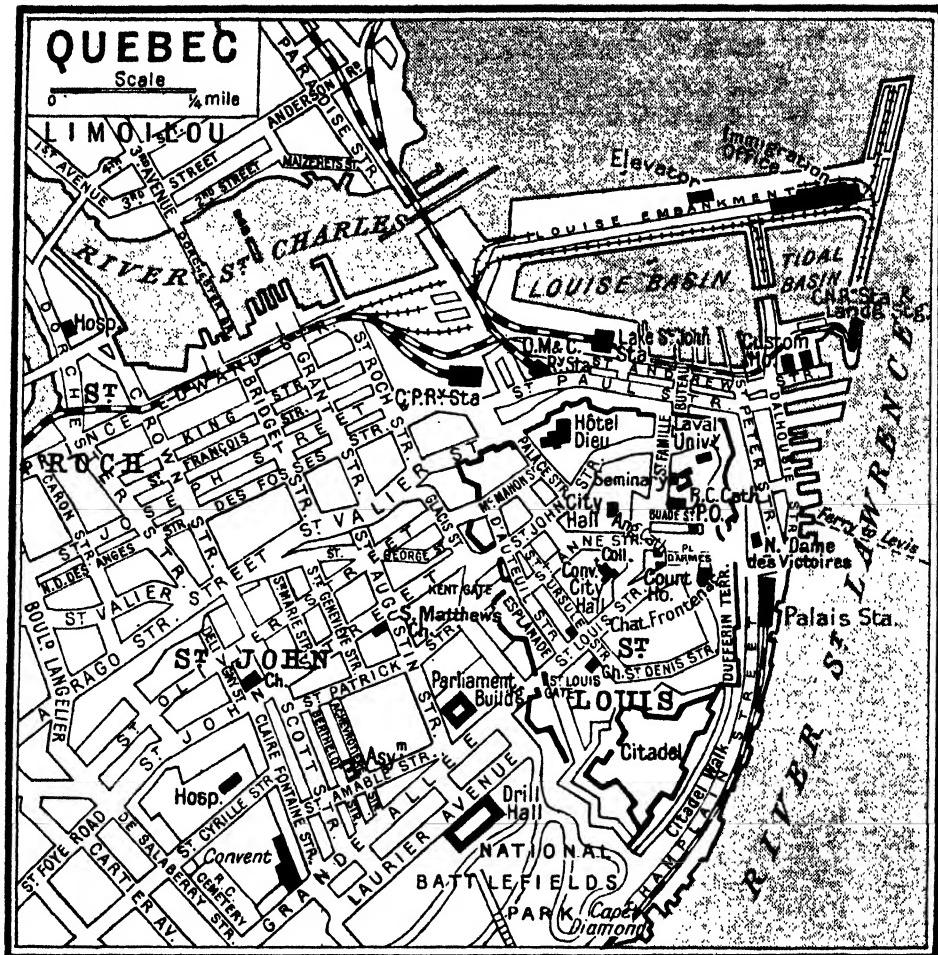
The narrow and winding cobbled streets, the pointed or gable roofs, quiet alleys leading abruptly to a dim, religious cloister, the leafy convent gardens, the little parks of obsolete canon—all contribute to an individuality

which is quite without parallel in the New World. The electric tramcars with their speed and clangour seem to strike an incongruous note; but despite these signs of progress, Quebec's dignity remains undisturbed.

The View from Dufferin Terrace

From Dufferin Terrace, a lengthy platform erected on the edge of the cliff at a height of 185 feet, a superb view is to be obtained of the surrounding country. Immediately beneath are clustered the sag-roofed dwellings of the Lower Town—an authentic fragment of Normandy—with quaint dormer windows, wooden bridges crossing from roof to roof, chimneys and coigns hugging the dark rock, streets of stairways of the dingiest and narrowest. Just beyond stretches the wide splendour of the St. Lawrence, dotted with steamers and sailing ships and red-sailed smaller craft. In midstream is the beautiful Isle of Orleans, on the opposite shore the heights of Lévis, to the left the sparkling villages of the fertile Côte de Beaupré, and the distant Laurentide mountains in diminishing perspective, wearing their mantles of cloud.

In the immediate foreground, beyond the Place d'Armes, are the Post Office, Laval University and the Seminary, the latter a grey and massive group of buildings, with entrances hidden away mysteriously in side streets, threaded by dark passages and full of bare corridors. Sombre buildings perch upon the primeval rock, from whose quadrangles and class-rooms may be heard the sounds of student recitations and student frolics. Glimpses are, perchance, caught of youths attired in long blue frocks, with bright green sashes.



QUEBEC PERCHED UPON ITS HISTORIC HEIGHTS

Laval University has been called the brain of French Canada. Although this institution, with its hundreds of scholars, guards zealously the native spirit and the ancient traditions, there are yet many bonds which ally it to modern France, while rejecting the latter's unfaith and irreverence. For its professors and tutors keep in touch with French thought and French belles-lettres. Most of them have passed a year in France.

Of this group of buildings the oldest dates from 1666, and the newest from yesterday. The Seminary was founded by the grim and masterful François de Montmorency Laval, first bishop of Quebec, and is divided into the Great Seminary for the education of priests, and the Minor Seminary (le Petit

Séminaire) for the general education of boys, of whom over four hundred attend. It was out of these twin seminaries that the university arose not longer ago than in 1852. Pius IX. issued a bull in its favour, accorded it the patronage of the Cardinal Prefect of the Propaganda, and placed it under the direct supervision of a council of bishops. Thus Laval is strictly within the control of the Quebec hierarchy.

The noble foundress of the Hôtel Dieu convent and hospital was the Duchesse d'Aiguillon, niece of Cardinal Richelieu. The imposing buildings date from 1654, and have been repeatedly extended. Among the relics in the convent are a silver bust enshrining the skull of Jean de Bréboeuf, a Jesuit missionary tortured

to death by Iroquois in 1649, and the bones of his fellow-martyr, Lalemant.

At the Ursuline Nunnery, founded in 1639 by Madame de la Peltrie and Marie de l'Incarnation, called the "S. Theresa of the New World," is buried the body of the vanquished hero, the Marquis de Montcalm, and his skull may be seen preserved in a glass case. Here also, before the statue of the Virgin, burns a votive lamp, never extinguished since it was given by Madeleine de Répentigny in 1717.

The Post Office occupies the site of the old Chien d'Or building, a stone from which, bearing the carved and gilded effigy of a dog, has been built into the façade, together with a quaint inscription, which may be translated :

I am a dog who gnaws a bone
In gnawing which I take mine ease;
A time will come, though not yet here,
When I'll gnaw those who have gnawed me!

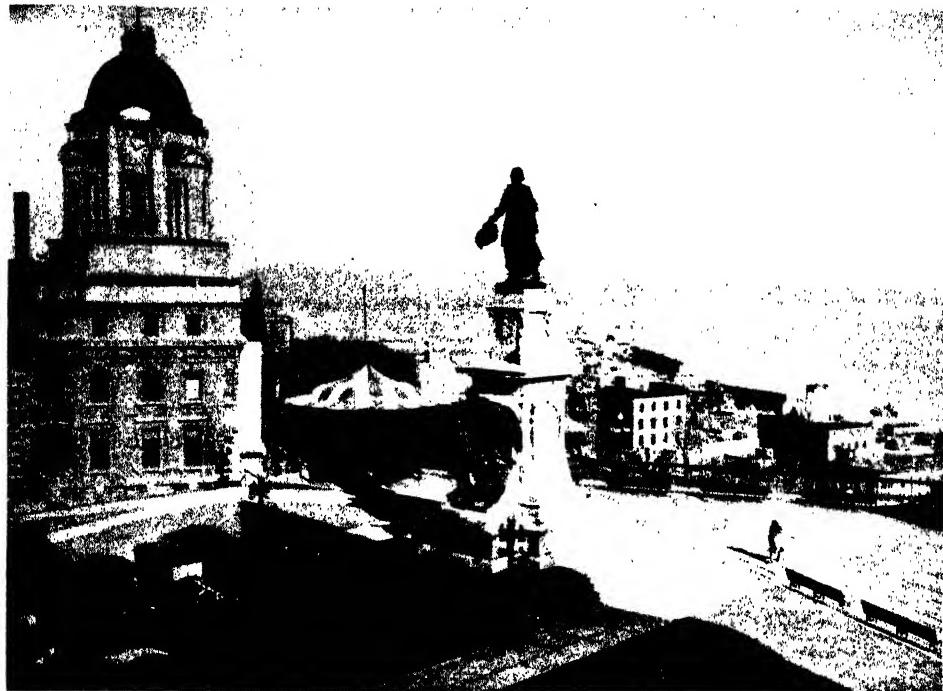
According to the local story, this house belonged to a rich merchant named Philibert, who had suffered at the hands of the intendant Bigot, and chose this way of expressing his hatred. For his audacity he was slain in the house at Bigot's instigation. But the murderer himself met his death in Pondicherry many years later at the hands of Philibert's son. The legend has been frequently celebrated in fiction and verse. A generation afterwards the house was occupied as an inn, and the innkeeper's pretty niece so fascinated a young British naval officer named Horatio Nelson that the future hero of Trafalgar had to be smuggled aboard by his friends to prevent an imprudent marriage.

The Place d'Armes was the parade-ground and fashionable promenade of the French period. A century and a quarter ago there was built on its



HUNTING FOR BARGAINS IN THE LOWER TOWN MARKET

In the summer the farmers from neighbouring parishes come by river to Quebec with their produce. This goes for a cheaper price than can be had in the shops, and so there are plenty of customers. Formerly the old Champlain Market stood near here, but the building was pulled down. The dome to the left is on the roof of the Post Office



Ewing Galloway

DUFFERIN TERRACE AND THE RIVER FROM CHATEAU FRONTENAC

Skirting the south east side of the city there is a great wooden platform set up along the brow of the cliffs. It is called Dufferin Terrace, and varies in width from 50 to 100 feet and is about 460 yards long. By the band stand at the north end is the statue of Champlain, the gallant French explorer, who founded the city in 1608 and was appointed governor of the then French colony.



C. P. R.

GREY STONE FAÇADE OF THE QUEBEC LEGISLATURE

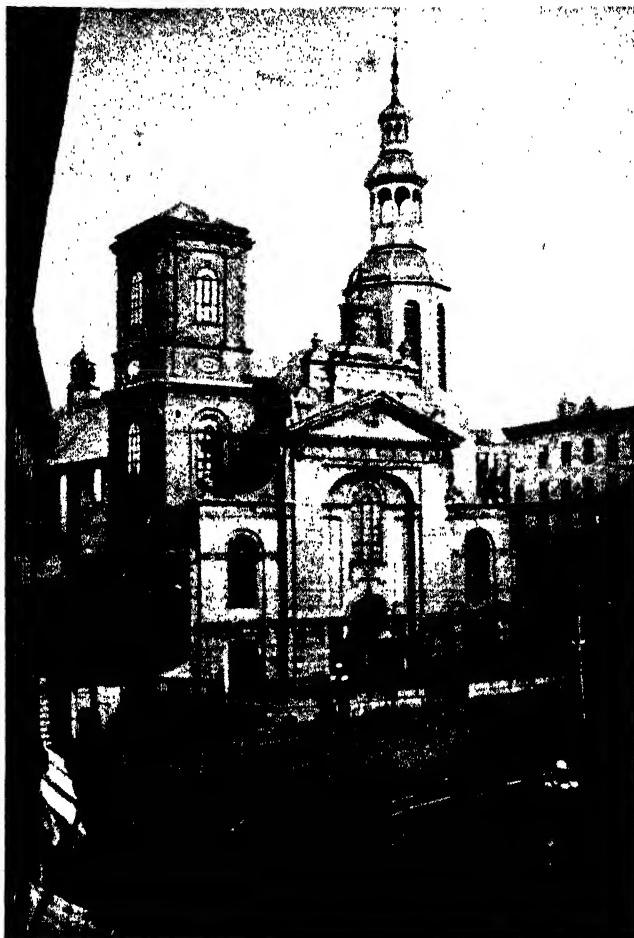
Just outside the old walls which kept the city on the west or landward side are situated the Parliament Buildings, close to the St. Louis Gate. They are built of grey stone in the style of the French Renaissance and date from 1892. The ascent of the tower, which is 160 feet high, rewards the climber with one of the finest views obtainable of the city and its surroundings.

western side the Anglican cathedral, which is interesting for its many military memorials and the colours of the 69th regiment, as well as for the Communion plate which was given by King George III.

Even Quebec, reluctant as it is to alter, has not been able altogether to resist structural changes. Old buildings sanctified by time and legend have vanished, and their places been taken by new ones formed in the semblance of the old.

In the French period the fortifications comprised three city gates, one of which, the St. Louis Gate, is now represented by a modern structure, while the St. John Gate and Palace Gate have entirely disappeared. The Hope and Prescott gates, which were added by the English, have also gone. Kent Gate, built to commemorate Queen Victoria's father, who lived for three years in a house near at hand, is quite modern.

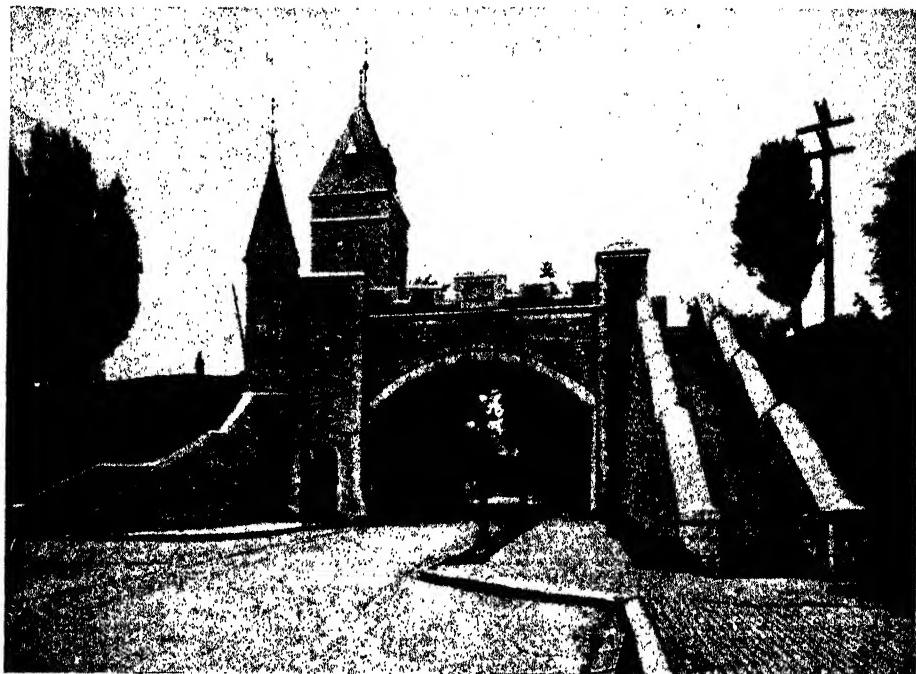
On the ground where the City Hall stands was the old Jesuits' College, dating from 1635. Within those walls the valiant martyrs whom the historian Parkman has rendered illustrious — Bréboeuf, Lalemant, Jogues, Noue, Daniel and Vimont—taught their votaries, and here Marquette planned his great mission on the Mississippi. In demolishing the building the workmen unearthed with their pickaxes the decapitated skeleton of Jean Liégois, who built the college and was murdered by the Iroquois, and the remains of Jean de Quen, the discoverer of Lake St. Jean, and François Perrot. They were given a public funeral and interred in the Ursuline Convent.



Ewing Galloway

ANGLICAN CATHEDRAL IN THE PLACE D'ARMES
At the north-west corner of the Place d'Armes, the parade ground of the old French days, is the Anglican Cathedral of the Holy Trinity. Built in 1804, it contains memorials to Quebec celebrities and communion plate given by George III.

The splendid Parliament buildings, in the French Renaissance style, which rise close to the St. Louis Gate, displaced nothing when they were built, because they are outside the walls. Here are housed the Legislative Assembly (81 members) and the Legislative Council (24 members) amidst spacious and tasteful surroundings. From the central tower (160 feet high) a very fine view is obtainable. Lodged in niches at intervals along the whole length of the building's façade stands a veritable battalion in bronze—statues of Jacques Cartier, Frontenac, Maisonneuve, Lévis, Wolfe, Montcalm and de Salaberry.



Ewing Galloway

MODERN ST. LOUIS GATE IN THE OLD CITY RAMPARTS

This is one of the three original sites of gateways in the old French fortifications. The arch and towers seen above are, of course, modern, but the wall on either side is a part of the remodelled fortifications constructed between 1823 and 1832. These enclosed a much larger area than the older works. The city now depends for its protection on detached forts

Indeed, Quebec is rich in statuary, for elsewhere there are effigies of Laval, Champlain, Montcalm and Frontenac, among others, besides the many inscribed reminders of the city's heroes and storied past.

Another historic site, that of the old Château de St. Louis, is to-day occupied by one of the most distinguished hotels in the world, the Château Frontenac. It is in the French baronial style, chiefly of light-red brick, with copper roofs, and it fills an important rôle in the daily drama of the city. For it is not only the European or American tourist who is found in these imposing corridors and richly decorated saloons ; "the Château" is also the most popular restaurant and rendezvous for society in Quebec.

At the southern extremity of Dufferin Terrace and the highest point of the plateau is reared Quebec's historic fortification, the Citadel. It covers 40 acres, and although greatly extended

a century ago, follows generally the lines of the French works of 1716. Since the withdrawal of the imperial garrison in 1871 the fortress has been occupied by Canadian troops. It comprises a large parade and drill ground, surrounded by barracks and magazines. A battery of heavy guns is mounted on the ramparts. The officers' quarters are in a large stone building, one end of which is set apart as the governor-general's residence, occupied by him on his annual visit to Quebec.

But the Citadel and the other Quebec fortifications would fare ill were heavy armaments allowed to approach within range. To reinforce these defences three detached forts were constructed at Lévis, on the opposite bank of the river ; but greater reliance is placed on the two new and powerful forts nine miles below the city at Beaumont, where they command the channel of the St. Lawrence.

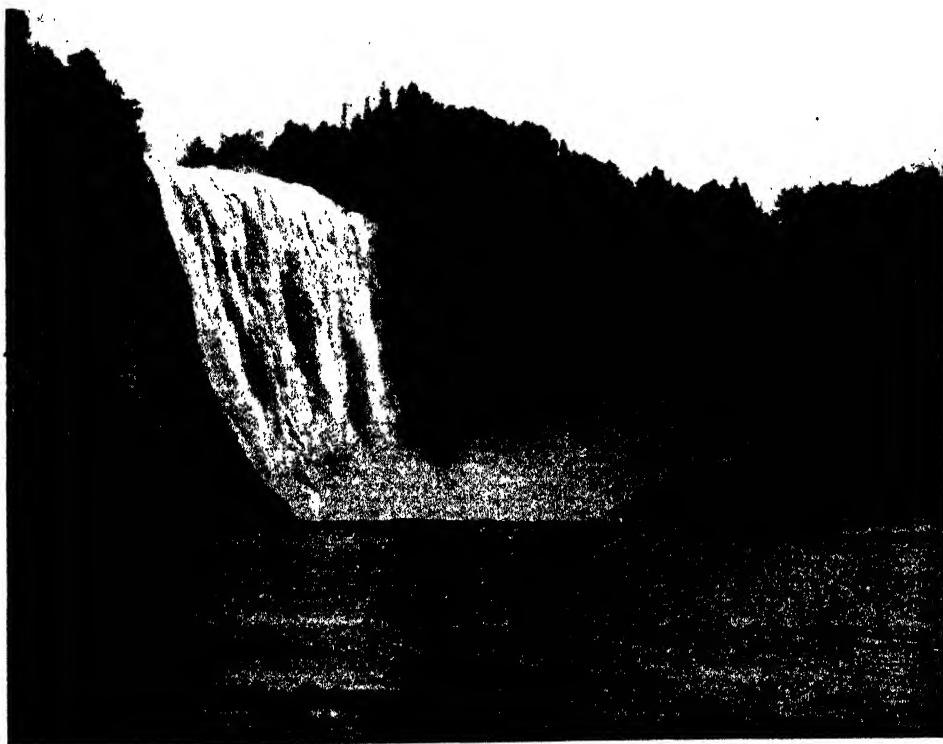
The western ramparts of the Citadel overlook the world-renowned Plains of

Abraham, where was fought one of the most decisive battles of history. The ground was named after Abraham Martin, the royal pilot of the St. Lawrence in the middle of the seventeenth century. When the battle was fought the Plains stretched without fence or enclosure up to the walls of Quebec and to the Côte Ste. Geneviève. Being sprinkled with bushes and with dense clumps of trees in the rear, they afforded far more cover for the French and Indian marksmen than there would be at present.

The British line occupied a spot between the golf links and the gaol, in alignment with de Salaberry Street. A large part of the suburbs of Quebec is built upon the original Plains of Abraham and covers a portion of the battlefield. The century-old misconception as to the exact site of the battle has lately been cleared up.

Wolfe was commanding the British right wing, and was hit three times, receiving his last and mortal wound 250 yards east of the monument which to-day commemorates his victory and death.

Formerly the spot where Wolfe, at the head of the Louisburg Grenadiers, gave the fatal order to fire which caused such havoc in the French ranks was believed to be nearly half a mile to the westward, owing to the faultiness of the old maps; wherefore tourists gazing at the monument used to marvel that the dying conqueror should have been borne forward to die, instead of to the rear. The exact spot is well authenticated, because a heavy stone was rolled thither immediately after the battle. Montcalm was first struck by a musket-ball and then by a ball from the solitary cannon the British had managed to bring up the cliff. He was carried into



"Canada"

FALLS HIGHER THAN NIAGARA: A POPULAR EXCURSION FROM QUEBEC
About seven miles below Quebec the Montmorency river plunges into the St. Lawrence. The drop is a sheer 265 feet, nearly 100 feet higher than the highest fall at Niagara, which is 167 feet on the American side. Two towers, seen above the falls, supported a bridge, which fell in 1856. There is a power station here which supplies Quebec with electricity



Ewing Galloway

LITTLE CHAMPLAIN STREET IN THE QUAINTE LOWER TOWN

One is able to recapture some of the old outward aspect of French Quebec in the riverside quarter at the base of the cliffs known as Lower Town. Descending Mountain Hill Street, the visitor finds himself at the head of this iron stairway. It replaced the old "Breakneck Steps," and leads down to Little Champlain Street which follows the river. Near by is the Palais Station (C. N. R.)

Quebec and breathed his last in the Ursuline nunnery.

A couple of miles westward is Wolfe's Cove (formerly called L'Anse de Foulon) where the British forces made the nocturnal ascent to the Plains. Wolfe and his men climbed up by a precipitous path, just to the left of a tiny brook, which can be easily identified at the present day.

A large part of the battle area is being converted into a public park, in addition

to the space formerly enclosed, and it is hoped that the unsightly gaol will be demolished or converted into a public museum. Spencer Wood, near by, surrounded with its beautiful grounds, is the official residence of the lieutenant-governor of Quebec.

Thus far we have been occupying ourselves with the city on the heights. But there is also a highly interesting and historic Lower Town, formerly to be reached by a dizzy flight of "break-

neck steps," now replaced by a secure iron stairway, or farther eastward by a hydraulic elevator and other steps. At the bottom, just under the Citadel, is the quaint little old church of Notre Dame des Victoires, close to the site of Champlain's building of 1608. The name of this little church—Our Lady of Victories—commemorates the deliverance of Quebec from the English attacks of 1690 and 1711.

The thoroughfare just to the south, Sous-le-Fort Street, recalls the narrow, medieval streets of many European towns. Little Champlain Street is the scene of the death of the American general Montgomery, who vainly tried to capture the city during the American Revolution. On the site of the former Champlain Market is the new terminus of the Canadian Northern Railway, the Palais Station.

Ocean Port and Railway Centre

Still moving along the hem of the skirts of the city, we find close to the water's edge the two busy streets, with their shops, banks and warehouses, of St. Peter and St. Paul; and here great transformations—perhaps the greatest of all—have been brought about at Quebec. For Quebec is a busy ocean port and a great railway centre. The capacious Louise Basin, with a wet-dock 40 acres in area and a tidal-dock half that size, with wharves, quays and piers, would have astonished Champlain and even his eighteenth and nineteenth century successors, Carleton and Dufferin.

By the Louise Embankment, which forms the outer wall of the docks, is the immigration office, with the barracks for the detention of thousands of immigrants until the long land journey to the west is begun. No less than £4,000,000 has been spent upon Quebec harbour improvements, including a large dry-dock. A lofty concrete grain elevator holding one million bushels has also been built.

Close at hand is the old Grand Trunk (now C.N.R.) railway station and

landing station, while at the farther end of Louise basin is the C.P.R. station, the Lake St. John railway, and the little line which conveys the pilgrims along the left bank of the St. Lawrence to the shrine of S. Anne de Beaupré, the Canadian Lourdes.

Sad Effects of Bigot's Rule

A couple of quaint old streets at the base of the promontory are Sault-au-Matelot and Sous-le-Cap, whose inhabitants seem proud of their picturesque dilapidation and precarious pavements. In the former a tablet has been set up in memory of the local heroes who at this point repulsed the attack of the American general, Benedict Arnold, in 1775.

But a far more interesting site is that around the corner of the cliff beneath the Grey Nunnery far overhead. Here are the vestiges of the palace of the intendant Bigot, now forming part of the walls of Boswell's Brewery. Bigot was the head of the civil administration of the French colony of New France, and by his profligacy, oppression and dishonesty was the chief factor in undermining the resources of the colony and precipitating its moral and financial ruin. Hard by stood the large store-house ("La Friponne"), built by Bigot to house the merchandise shipped from France pending its disposal by sale to the government or the citizens.

Quebec as a Winter Resort

A new rôle has within recent years been allotted to Quebec, one which has largely increased the number of her votaries. It is becoming one of the most popular winter resorts on the continent. The attractions include a triple toboggan chute, extending the entire length of Dufferin Terrace, an outdoor skating rink, a ski jump on Citadel Hill, besides other diversions. Indeed in winter, with its ramparts, roofs and minarets clad in a mantle of snow, Quebec has a charm and fascination which, in the opinion of many, rivals its summer aspect.



WHITE WALLS OF UDAIPUR RISING OUT OF THE BLUE WATERS OF LAKE PICHOLA

Udaipur is the capital of the native state of Udaipur, or Mewar, in Rajputana, and has one of the most beautiful settings of any town in India; its walls are washed by the waters of Lake Pichola, the north end of which is crossed by a bridge which leads to the city at the "Moon Gate." The palace of granite and white marble rises nearly 100 feet from the ground and is flanked by octagonal, cupola-topped towers; a terrace, supported by a triple row of arches, extends throughout its length, and is used as a parade ground for the state troops.

E. Candier

RAJPUTANA, SIND & BALUCHISTAN

The Thirsty Lands of Western India

by Sir Thomas Holdich

Author of "The Indian Borderland," etc.

THE Thar, or desert of Western Rajputana, merges into the sandy wastes of Sind, which reach westward to the dreary frontier of Baluchistan beyond the lower Indus.

This has been the southern barrier of India throughout the ages, protecting the peninsula from human tides of irruption and forcing approach from the west into the northern passes.

No army of the past has crossed that desert eastwards ; no horde of Asiatics has shaped its slow movement that way, although it is possible that under other geographical conditions in the dim past there may have been an open route near the Arabian Sea coast which admitted Dravidian races to Central and Southern India, and which is now closed for good.

We have, indeed, the record of one great adventurer (Mahmud of Ghazni) who faced the risks of the desert when he descended on Gujarat and sacked Somnath ; but his experiences were not encouraging, and no later adventurer has dared follow his example.

Overlying the greater part of this wide extent of desert are sand dunes from 50 to 100 feet high moving eastward in slow procession and systematic curves in obedience to the westerly winds. What little vegetation there is is gathered about the cities of the desert, and is mostly imported.

Vast Floor of an Ancient Sea

The desert character of this vast floor of a great primeval sea is much modified on the north-east where it approaches the Punjab, and on the south-west, where a considerable area of the Jodhpur state is watered by affluents of the Luni river.

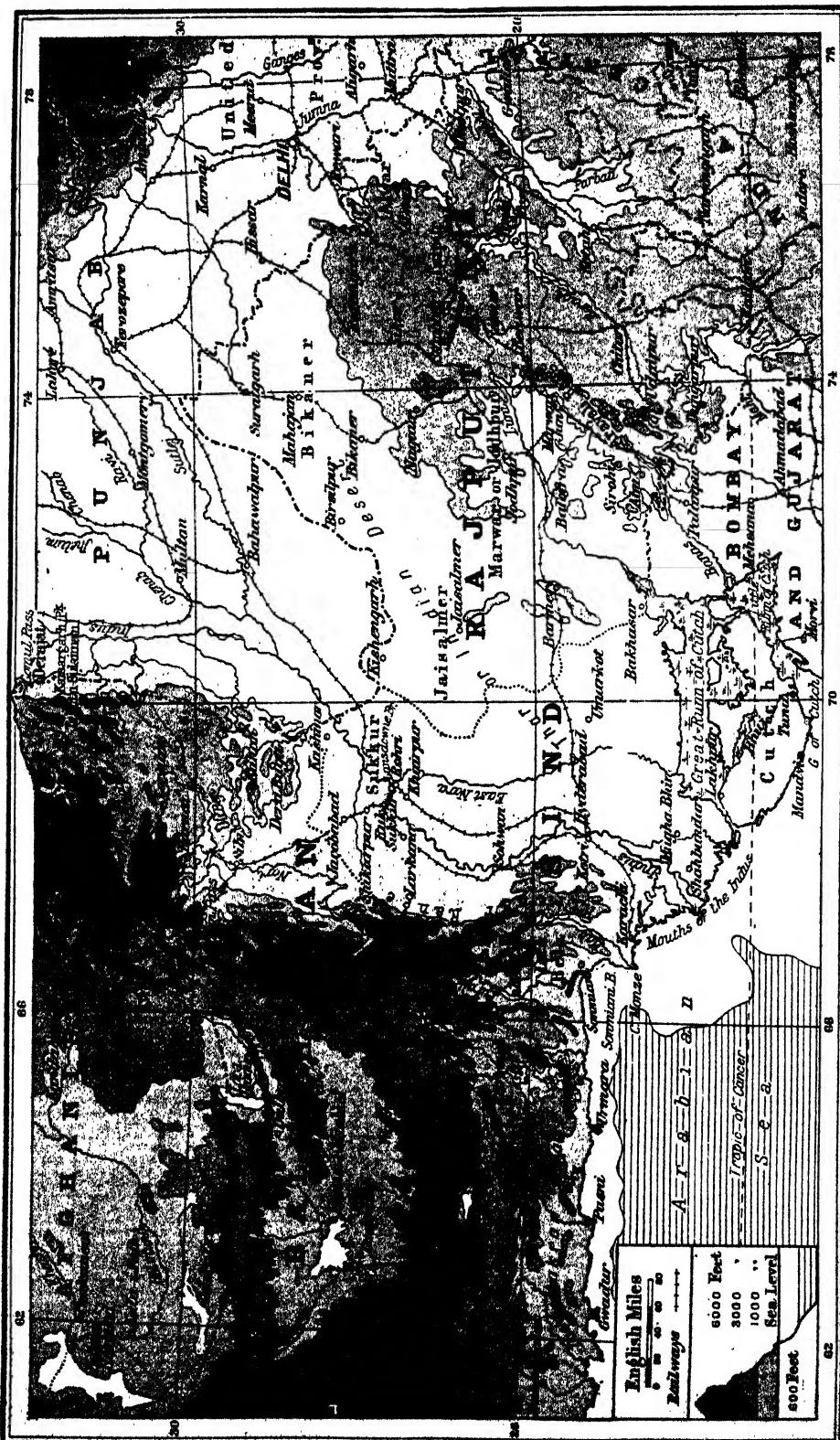
The province of Rajputana is roughly divided by that most ancient and interesting range, the Aravali. This range can be traced from the Ridge at Delhi to the extreme southern border of the province where it culminates in the outlying and temple-crowned peak of Abu. From it, as it strikes from north-east to south-west, there stretches westward the desert country in which are the native states of Bikaner, Jaisalmer and Jodhpur. To the east are Alwar, Jaipur, Tonk and Udaipur. In the centre of the province is the British state of Ajmer-Merwara, like a red island in a sea of yellow sand, the headquarters of the government of Rajputana.

Plains that Gather no Rain

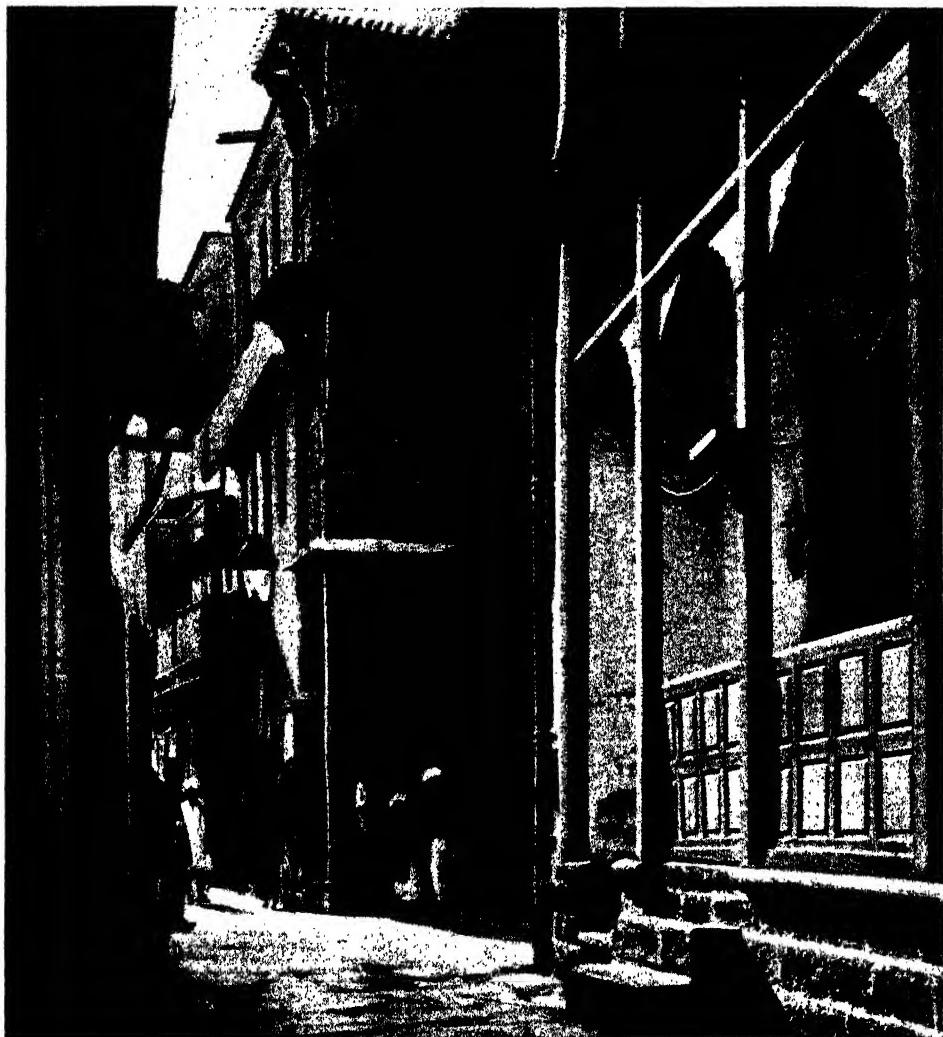
Railways now intersect the country both east and west of the Aravalis. From Delhi to Ajmer and Abu (continuing to Ahmadabad in Bombay) there runs a central line, intersected at Sambhur (near the Salt Lake) by the Jaipur-Jodhpur extension from the Jumna valley, which passes on through the southern desert districts westward to Hyderabad on the Indus. From Jodhpur northward a line runs to Bikaner and to the Punjab through the desert. These are all narrow gauge.

All the vast expanse of desiccated plain forming Western Rajputana terminates in a broad depression on the south-west, the Runn of Cutch, and thus lies open to the vapour-bearing winds of the south-west monsoon. These sail unhindered through it and over it, leaving no moisture till they reach the Punjab.

On its northern border the desert sands give place gradually to the



PARCHED AND SANDY PLAINS THAT PROTECT INDIA FROM WESTERN INVASION



Col. W. J. P. Rodd

KARACHI: NARROW COBBLED STREET IN THE HEART OF THE CITY

In the city or native quarter of Karachi the streets are paved lanes in which the pedestrians must press themselves against the walls to permit a cart to pass. The houses have carved overhanging eaves and balconies which blot out the light. The shops are sometimes three feet above the level of the roadway, which is faintly lit up at night by oil lamps on the walls

scrub-covered flats peculiar to the Punjab. East of the Aravalis the character of the country changes. Travelling southward from Delhi through Rewari to Alwar, Jaipur and the cities of the south, one recognizes certain desert attributes even in that cultivated and comparatively fertile part of Rajputana.

The bracing air by day and the purple starlit nights; the wide expanse of open plain chequered with sparse cultivation; the occasional streaks of broken hills, always following

the Aravali strike; the Hindu temples pointing from their summits all tend to give Rajputana an indefinable atmosphere of peace and charm.

In the northern districts we encounter most of the familiar trees of India—the gigantic banyan and the sacred pipal (among the figs), the sisal, nim, cotton, sirrus, tamarind and other shade trees; occasional groves of mango and the almost universal scrub jungle on the low hills, as well as the bhér are all in evidence.

Where cultivation is wider and more frequent in the north-east of the province we find huge crops of maize, jowar, bajra (millets), together with wheat (for export) and cotton. The opium poppy makes bright patches in the landscape. Villages stand wide apart and are usually well built and fairly clean, and from the scattered pasturage around the half-wild cattle crowd into the narrow lanes as the sun gets low.

Incessant Struggle for Water

As one travels farther south, desert indications increase, cultivation grows scarce and the difficulty of water raising becomes more and more apparent, until at last the creaky voice of the slow-turning irrigation wheel is heard no more, and the whole landscape is completely desolate and dry.

And yet in the midst of a flat, sandy plain one may see now and then a couple of yoked bullocks apparently strolling at leisure at the end of a long, thin rope, which, traced to its source, is slowly lifting a bucketful of water from a well perhaps hundreds of feet deep.

Here, too, on the edge of the desert thrives the miracle of the water melon containing more deliciously cool liquid than any fruit of its species. This is one of the minor compensations of nature in a torrid clime.

The production of wheat in the Rajputana states is by no means inconsiderable. The average per year is 201,200 tons, and cotton runs to 93,000 bales, each bale being equal to 400 lb. Wheat and cotton form the chief bulk of exports from Rajputana. There is indeed very little else to export.

Home of an Historic Chivalry

Rajputana is essentially the home of the Aryan Rajput. There are Rajputs scattered all over northern India, in the hills and the plains, and wherever found they cling to their proud traditions. But it is in Rajputana, in Udaipur and Jaisalmer, that the Rajput lives in conscious superiority of race over the rest of mankind.

The shining and historic tales of Rajput chivalry can only be referred to here in connexion with their age-old cities and fortresses, which still exist in striking contrast to the modern cities with their rows of stucco-faced houses, electric trams and hoarse, barking motor-cars.

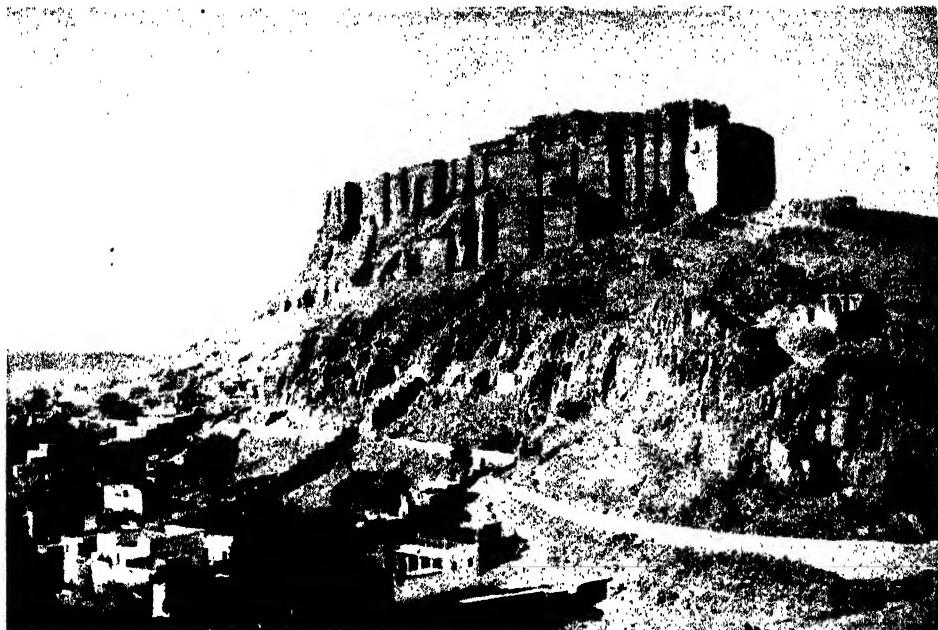
Preeminent among those cities that still float the banner of Rajput chivalry and can boast their historic antiquity, I would place Chitor, Udaipur and Jaisalmer. Still lives the story of the "Great Sacrifice of Honourable Death" (the *johar*) of Chitor when, early in the fourteenth century, all the women sought the "embrace of death" in full bridal array rather than fall into the hands of the Mahomedan conqueror Ala-ud-din, while their men poured forth from the open gates to die fighting.

Udaipur of the Solar Race

Chitor stands much as it stood then. Udaipur (home of the solar race) is still the embodiment of a "dream of beauty." Its marble palaces set on the margin of a wide lake reflecting the splendour of its carven terraces and gardens; the gaiety of its crowds and the ever shifting beauty of Oriental colouring preserve Udaipur as the most brilliant gem among India's fast changing cities.

Compared with other provinces, Rajputana has no important industrial centres and its trade is insignificant. Salt is the product which is perhaps most distinctive. In Rajputana it is the salt of the Sambhur lake.

Some 40 miles to the west of Jaipur is the important junction of Sambhur where the northern line from Delhi crosses the eastern line from Agra. Here a broad lake spreads a pink and white surface to the sky in the early months of the hot weather when the hot winds begin to be loosed from the southwest and the bare, burnt-up fields are idle, waiting for the next crop season. The water of the lake has evaporated, and the salt has crystallised into six inches or so of pink ice above a greasy field of black mud beneath.



T. E. Pye-Smith

STUPENDOUS FORTRESS OF JODHPUR UPON ITS HILL OF ROCK

Four hundred feet above the town of Jodhpur loom the round towers and tremendous walls of the fort which might have been hewn out of the living rock. At one end of the stronghold, and on the edge of a fearful cliff, are the buildings of the old palace, which is a series of courtyards within a courtyard, and includes the treasury where the maharaja's jewels are carefully guarded.



T. E. Pye-Smith

STRANGE STRUCTURES UPON THE HOUSES IN HYDERABAD, SIND

The present city of Hyderabad was founded in 1768 and is a railway junction lying to the east of the Indus opposite Kotri. The main bazaar begins outside the fort, whence the photograph was taken, and is famous for its embroideries and metal work. The heat is so great that the inhabitants have erected shelters with sloping roofs to catch the prevailing wind in order to cool their houses.

Pink and white with long streaks of black mud outcropping, the colour is curiously reproduced in the countless flights of flamingoes which live on the margin of the lake and make coloured patterns as they fly against the pale blue sky.

The crystals taken from the surface of the lake are perfect cubes, the colouring being due to a minute fungus, but although they are otherwise pure salt, they are not the salt of commerce, which is prepared by evaporation under the sun's heat in shallow pans along the margin of the lake. Both the Punjab and Rajputana consume their own salt. Very little is exported.

Easily and gradually the desert edges of Rajputana slide into the sands of Sind. Sind covers the valley of the Indus from the southern extremity of the trans-Indus Punjab (the Derajat) to

Karachi. What little cultivation there is, Sind owes entirely to the Indus and to irrigation work.

The Indus delta constantly shifting its shape and constitution of alluvial mud and sluggish estuary is sparsely covered with grass and scrub of the same character as that of the Sundarbans of Calcutta. The river itself requires constant supervision and watchfulness to keep it within the limits of the channels carved out in its self-raised aqueduct.

When, in times of flood, the muddy waters overflow their banks there is much trouble in Sind. Especially is this the case in the Kachi, where runs the railway from Ruk junction northward to Jacobabad, Sibi and Quetta. The line is not infrequently under water. From Ruk southward the railway follows the right bank of the Indus to Kotri (opposite Hyderabad on the left



E. N. A.

RAILWAY BRIDGE ACROSS THE CHAPPAR RIFT NEAR MANGI

At Sibi the railway to Quetta bifurcates, one line going through the Bolan Pass, the other proceeding to Harnai and Mangi. These strategic lines both serve Quetta, which guards the Khojak and Bolan passes, the only practicable routes for the invasion of India between the Gomal Pass and the Arabian Sea. The town is also the capital of Baluchistan and near it lies the Indian Staff College



Underwood

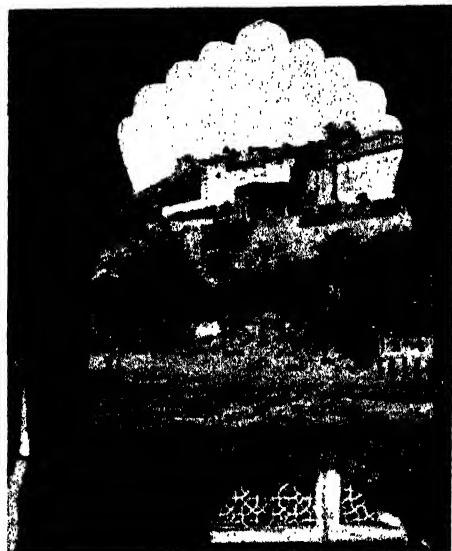
SCULPTURED TOWER OF VICTORY OR FAME AT CHITOR, MEWAR

Amid the ruins of Chitor, the ancient capital of Mewar, rises this Tower of Victory, erected in the fifteenth century to commemorate a victory over the ruler of Malwa. It is a splendid example of Jain architecture and consists of nine storeys, the upper two being open. The whole tower is 122 feet high and is covered with sculptures of Hindu divinities. There is a staircase inside

bank) and Karachi, while a branch eastward effects a junction with the north-western line by crossing the river at Sukkur.

Here is one of those changes in the character of the river bed which redeems the Indus from its placid progression

through flat plains and confines it within a rock-bound bed, a change which is both picturesque and useful. The occurrence of a small island in the middle of the river much assisted the engineering of the Lansdowne bridge at this point. The bridge is half cantilever



Rev. W. Mauleverer

AMBER, ONCE JAIPUR'S CAPITAL
The deserted ruins of Amber are situated about six miles from Jaipur, and the old palace, seen in the photograph, lies beneath a hill-perched fortress

and half simple girder and, like the Forth bridge, forms a remarkable feature in the surrounding landscape.

From the Rohri junction on the left bank the North-Western line runs southward to Hyderabad (where the Rajputana line joins) and is continued to Karachi via Kotri, where it crosses the river. Thus the section of the North-Western Railway joining Kotri with Karachi takes traffic from Baluchistan via Ruk, from the Punjab direct, and from Rajputana via Hyderabad.

Although Sind is an unattractive and brazen land yet there are green spots in it and endless antiquarian interest. Here and there the Indus riverain is thickly covered with jungle and there are reminiscences of Arab occupation to be found in the occasional date palm.

Poor as is the flora of Sind there is the noteworthy fact that it comprises more of the North African plants than any other Indian area. Indigenous cotton is a notable feature and there is at least one indigenous palm.

Where irrigation is ample and the station stands low there may be a wealth of overcrowded and imported vegetation which does little to improve

the atmosphere of the cantonment. This is indeed the case in most of the trans-Indus stations. The breathless stuffiness of the atmosphere in Jacobabad, for instance, in the hot weather, is in no way preferable to the intense rock-reflected heat of Sukkur, where the air is cool at night.

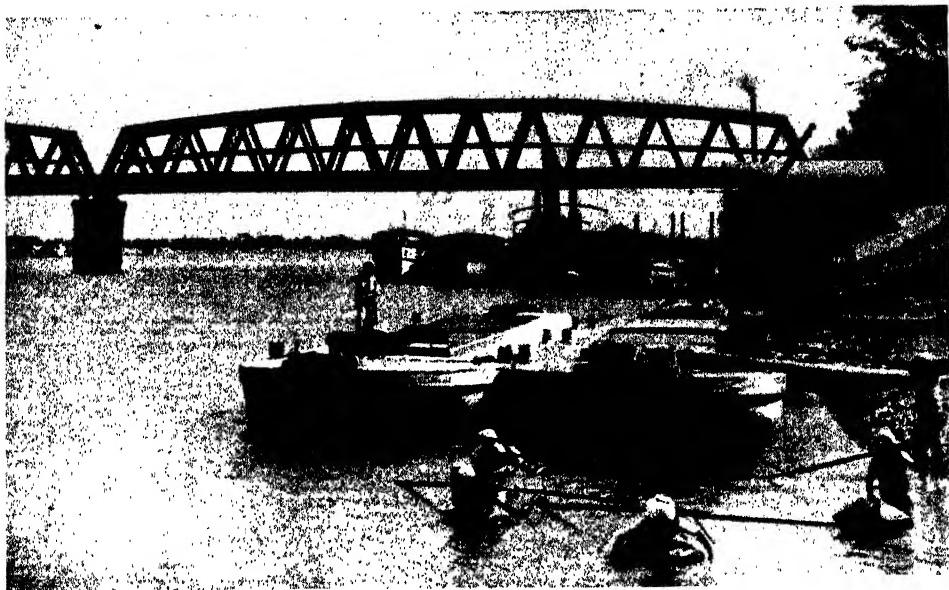
The rainless skies of Sind are responsible for the dust which lies so thick on the half-made roads that it is necessary to lay down straw before vehicles can pass over them. Sind lies between the two monsoons, the south-west and the north-west, so that the rainfall is abnormally small, amounting to but a few inches per annum, all of which may be the result of one or two days' fall; Karachi getting from 6 to 8 inches.

Karachi is, next to Bombay, the most notable port on the west coast of India and with its busy harbour and well laid out cantonments, its outlying coast-built bungalows and wide mangrove beds intersected by shady channels well adapted for boating, is one of the most attractive stations in India.

Very little trace of the Arab occupation is to be found now. It is most apparent, perhaps, in the language of Sind, but of the once famous mercantile towns which marked the long road from Syria to Multan it is difficult to identify even the sites.

The coming and going of Arab merchants and adventurers who made their way through the long narrow valleys of Makran (Southern Baluchistan) to the Indus valley in endless procession has left little record beyond what we find in the itineraries of medieval Arab geographers, but it has much significance now that this old-world and long-forgotten route is likely once again to witness a steadily increasing traffic between East and West. Already the aeroplane has directed its flight by the Makran coast between Mesopotamia and Karachi and it will not be a great while before the motor follows suit along the old caravan track.

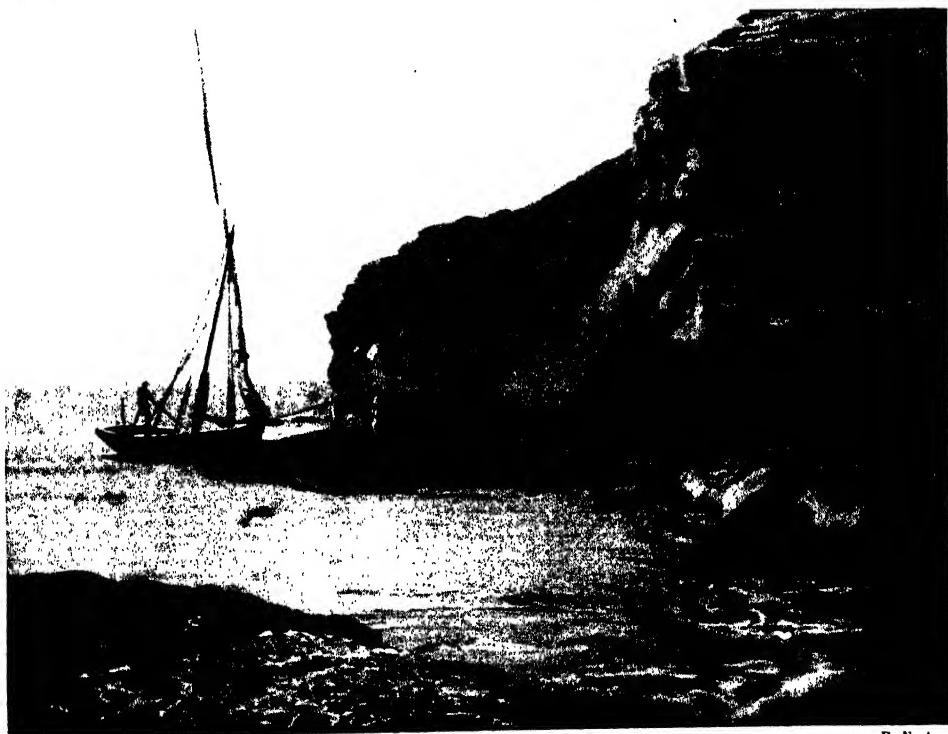
In the dry and thirsty land of Makran are many traces, in the shape of terraced



E. N. A.

RAILWAY BRIDGE SPANNING THE MIGHTY INDUS AT KOTRI

Lines from Delhi, Lahore and Rawalpindi cross the Indus at Kotri to join up with that from Quetta, giving the town some importance as a railway centre. The fishermen at Kotri use a square net attached to a pole and support themselves upon specially constructed earthenware jars, which they propel with their arms and legs. The Indus is infested at certain places by a species of crocodile



E. N. A.

ERODED CLIFFS ALONG THE COAST OF SIND NEAR KARACHI

From the Arabian Sea both Sind and Baluchistan, especially the latter, look very forbidding. A rocky beach overhung by yellowish cliffs gives on to a stony desert shimmering in the heat and stretching away interminably. A good deal of fishing is carried on off Karachi, which is noted for its oyster beds, but it gained its position as one of the chief ports of India by handling wheat from the Punjab

fields and occasional palm groves, of a past age of abundant moisture, and the existence of a people of considerable artistic culture who made use of sources of water long since disappeared.

This desiccation is widespread, and extends to Sind where the eastern half of the province has witnessed the drying up of great rivers which once carved channels for themselves from the far north to the sea.

A Forgotten and Uninviting Land

In Makran we are in Baluchistan, in its southernmost coastal province bordering the Arabian Sea. Makran is a forgotten and uninviting land, and yet, both on the immediate coast, and hidden among its narrow valleys are places of immense historic interest, and often of great beauty.

Nowhere is the recent geological age of the Baluch formation so clearly marked as here, miles of flat alluvium stretching inland to the nearest hill ridges, crossed by insufficiently marked camel tracks leading from the stinking little coast villages (where fish are buried, salted and exported to the coast of India) to the inland valleys, are unbroken in their drear monotony, except for certain low ridges and shining dumps of waste which, on close inspection, prove to consist of nothing but shells of recent geological age.

Deserted Centres of Industry

The inland lateral valleys enclosed between the rough walls of limestone ridges running east and west offer almost unbroken opportunity for traffic from Persia to the Indian border. Indeed, a motor could traverse the whole length of Makran without much difficulty.

Some of these valleys still show traces of the old world market towns and centres of industry so belauded by Arab geographers. There are palm groves, and here and there a stray oasis of cultivation which is inexpressibly welcome in this barren land.

The chief port on the coast is Gwadur, but strangely enough Gwadur is not

Baluch, it is an outpost of Muscat. Urmara and Pasni are stations of the Indo-European Telegraph line.

North of this coast province of Makran lie the open plains of central Baluchistan, of which country the general conformation includes a vast extent of comparatively (sometimes wholly) desert sand east of Persia and south of Afghanistan. Here all the drainage loses itself in swamps or lagoons.

Central Baluchistan is separated from the Indian frontier by the serrated bands of mountain formation which extend practically from Karachi to Quetta, and which, linking with the Makran systems, form one continuous barrier from the Gomul river (the Pathan frontier) on the north to the Persian frontier on the west.

Rivers Purali and Hab

Two deep wedges of open country are driven into this barrier. One is the Kachi, which includes within it the railway from Jacobabad to Sibi and Quetta, and the other is the Las Bela, opening where the Purali river, draining for 150 miles from the north, debouches into Sonmiani bay. Like the Purali, the Hab river, nearer Karachi, debouches into the Arabian Sea and forms the boundary between Baluchistan and India for some 50 miles of its lower course.

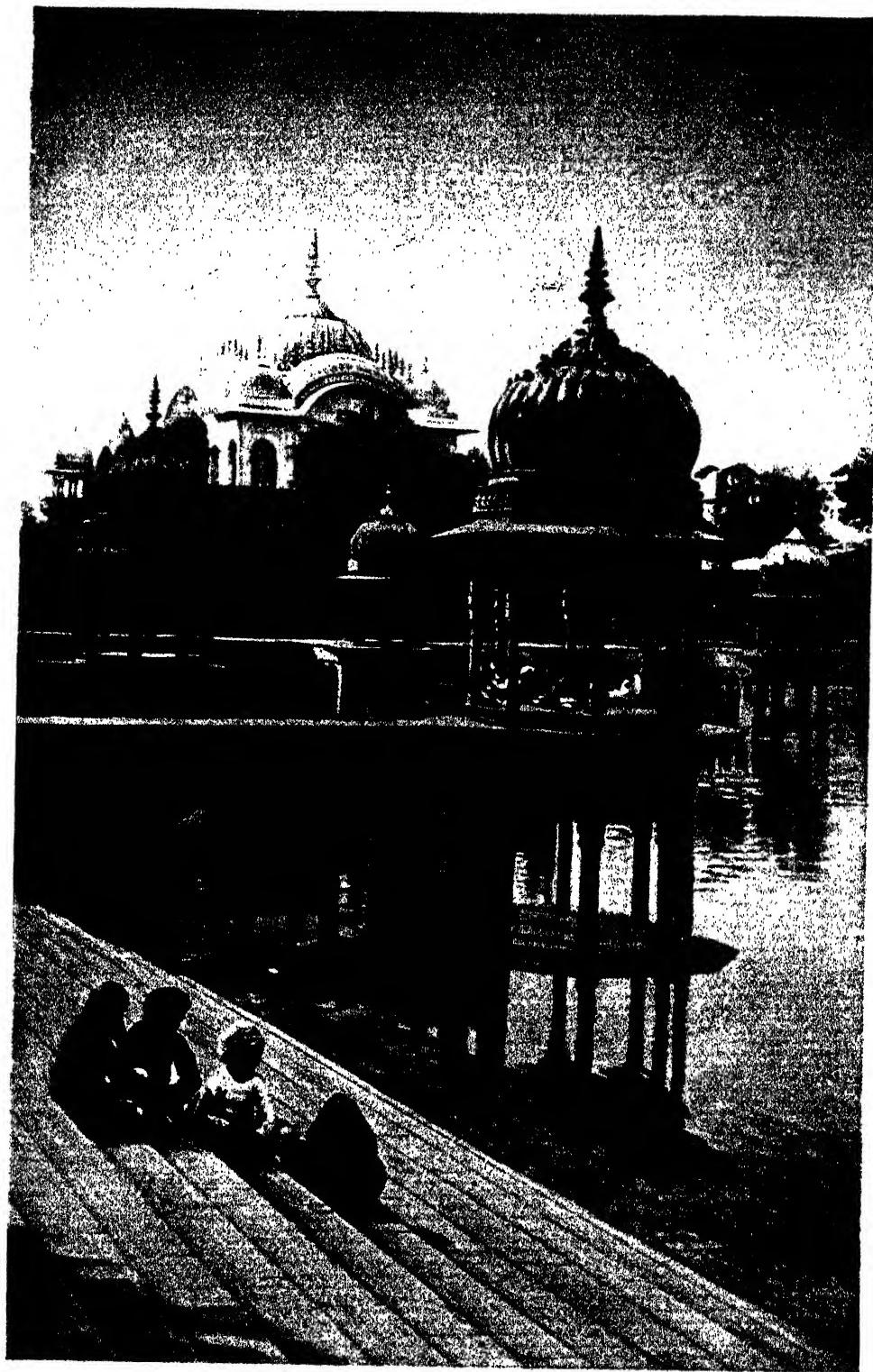
After leaving the Hab, the Sind boundary is taken up by the outermost of the southern frontier ranges, the Kirthar, for about 150 miles northward. Nothing further need be said about it. The huge slab-sided Kirthar, unbroken but for one narrow crack, is about the best boundary in India.

The first real break in this rock-bound frontier occurs at the Mulla opening, which offers a bad route from Sind to Kalat. This pass, indeed, has a history, but it is a very ancient one. Then, at the head of the Sind desert northward is the Kachi opening, leading to the Bolan, and the Bolan line from Sibi, with the Harnai loop, takes us over the border hills to Quetta. Thus from Quetta to Kalat, and from Kalat



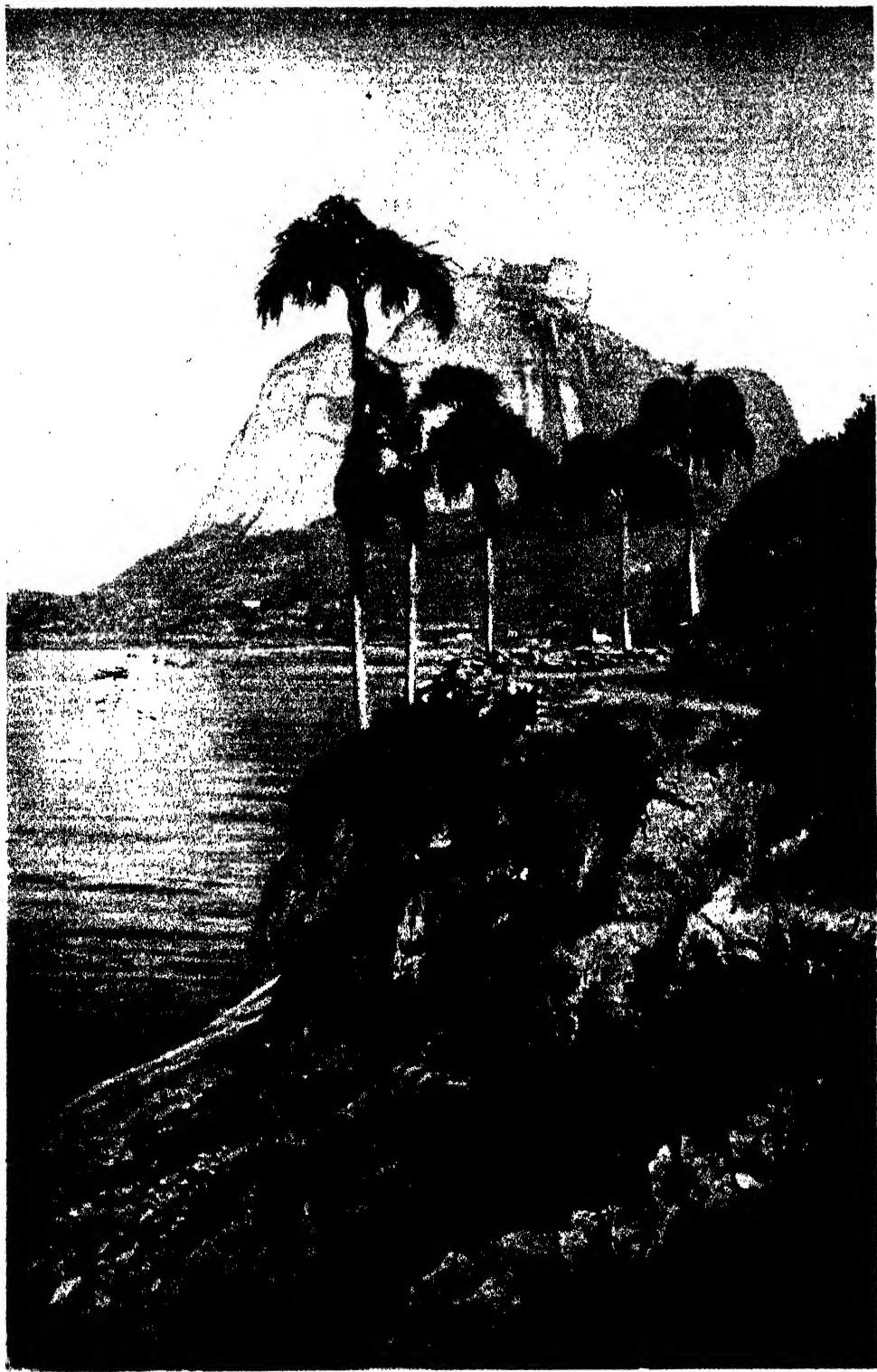
Underwood

RAJPUTANA. From the royal stables within the palace of the Maharaja of Jaipur come stately elephants with solemn tread



RAJPUTANA. *Blue pigeons flutter about the sacred precincts of the marble cenotaph to the Maharao Bakhtawar Singhji at Alwar*

Underwood

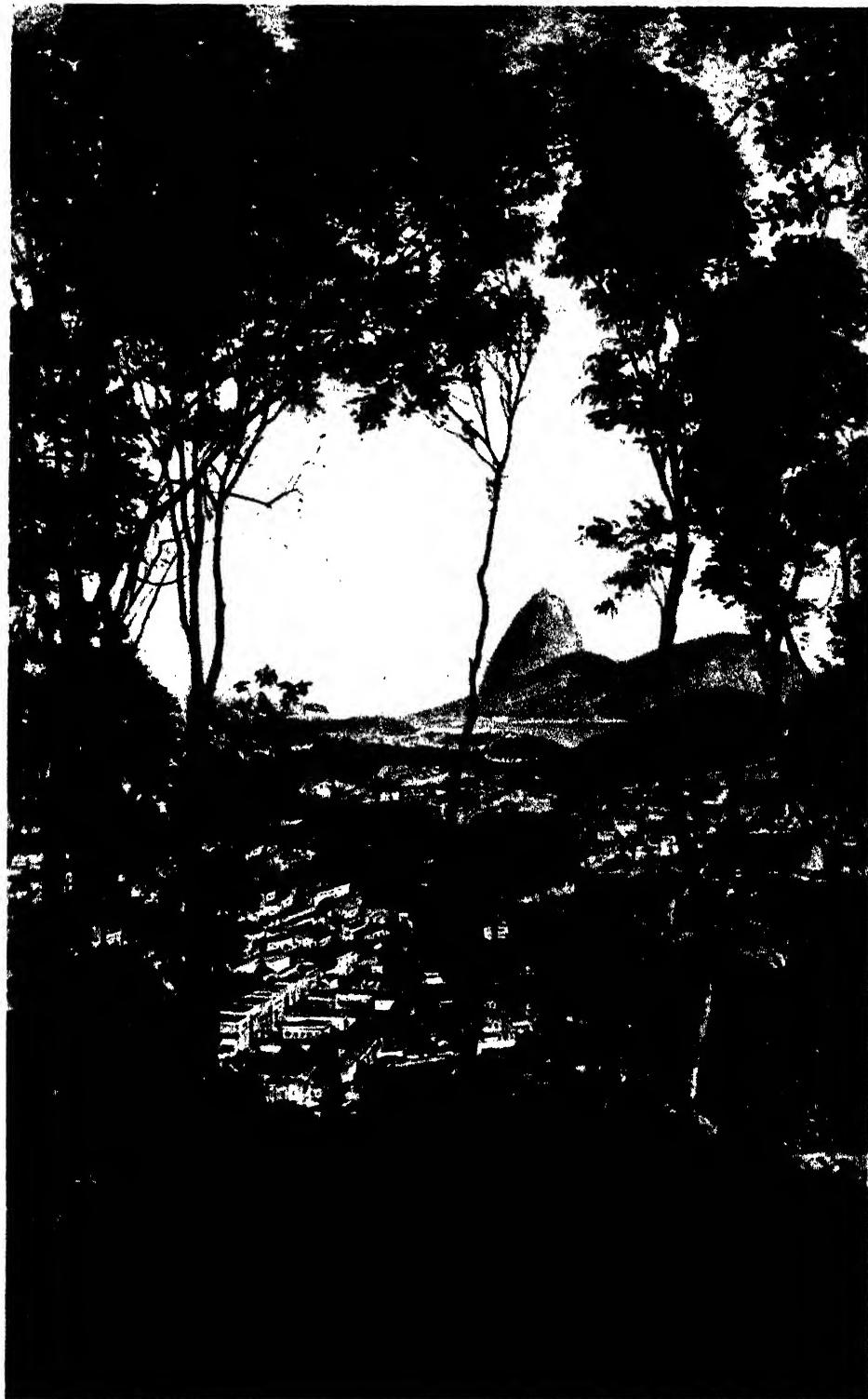


W. S. Barclay

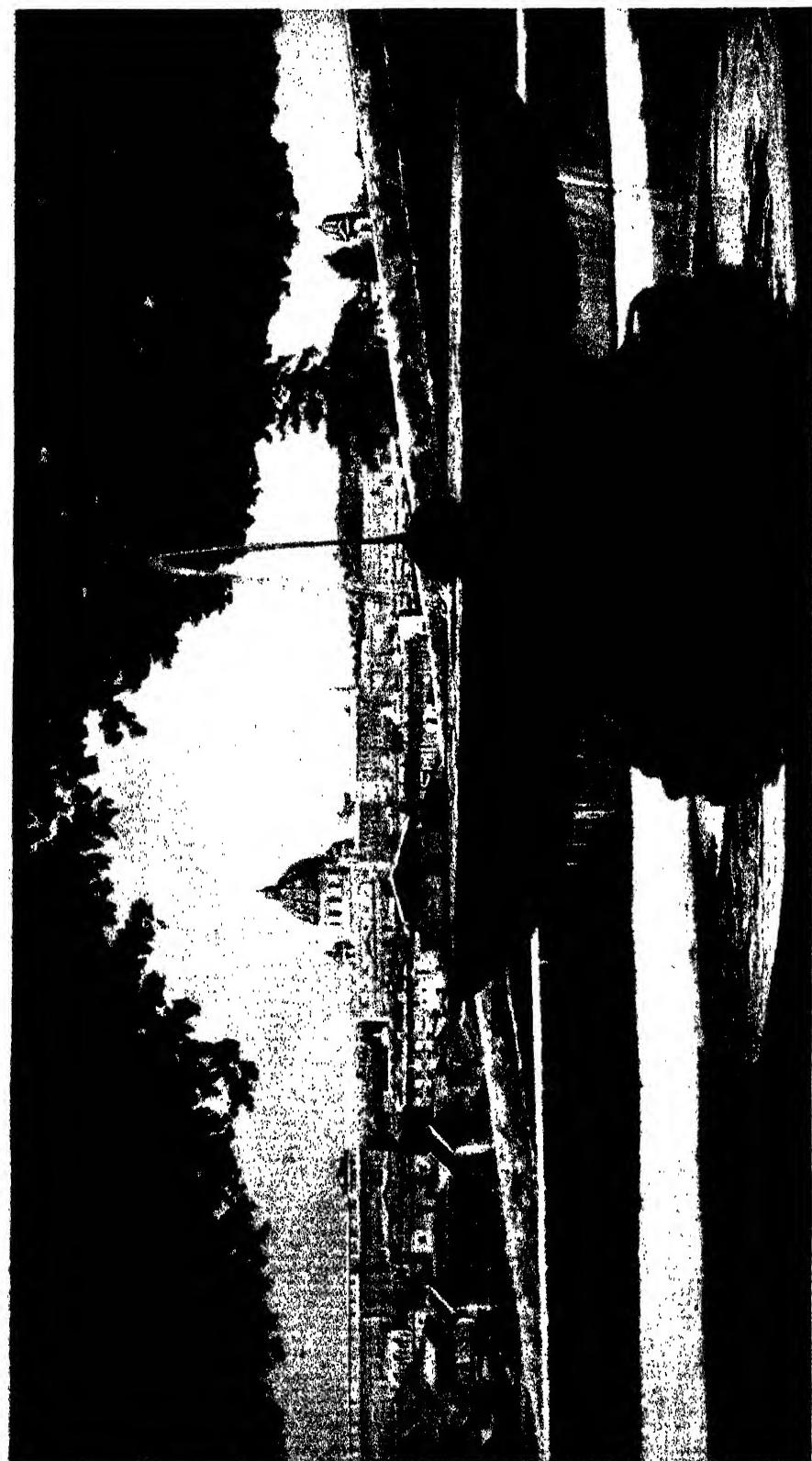
RIO DE JANEIRO. At the bend in the Avenida Niemeyer above the Atlantic the Hill of Gavea appears with its bare, sheer flanks

RIO DE JANEIRO. *The Avenida Beira Mar makes a superb sweep round Botafogo Bay and is ornamented with tropical trees, flower gardens and beautiful statuary. On the left across the bay is the regatta pavilion.*

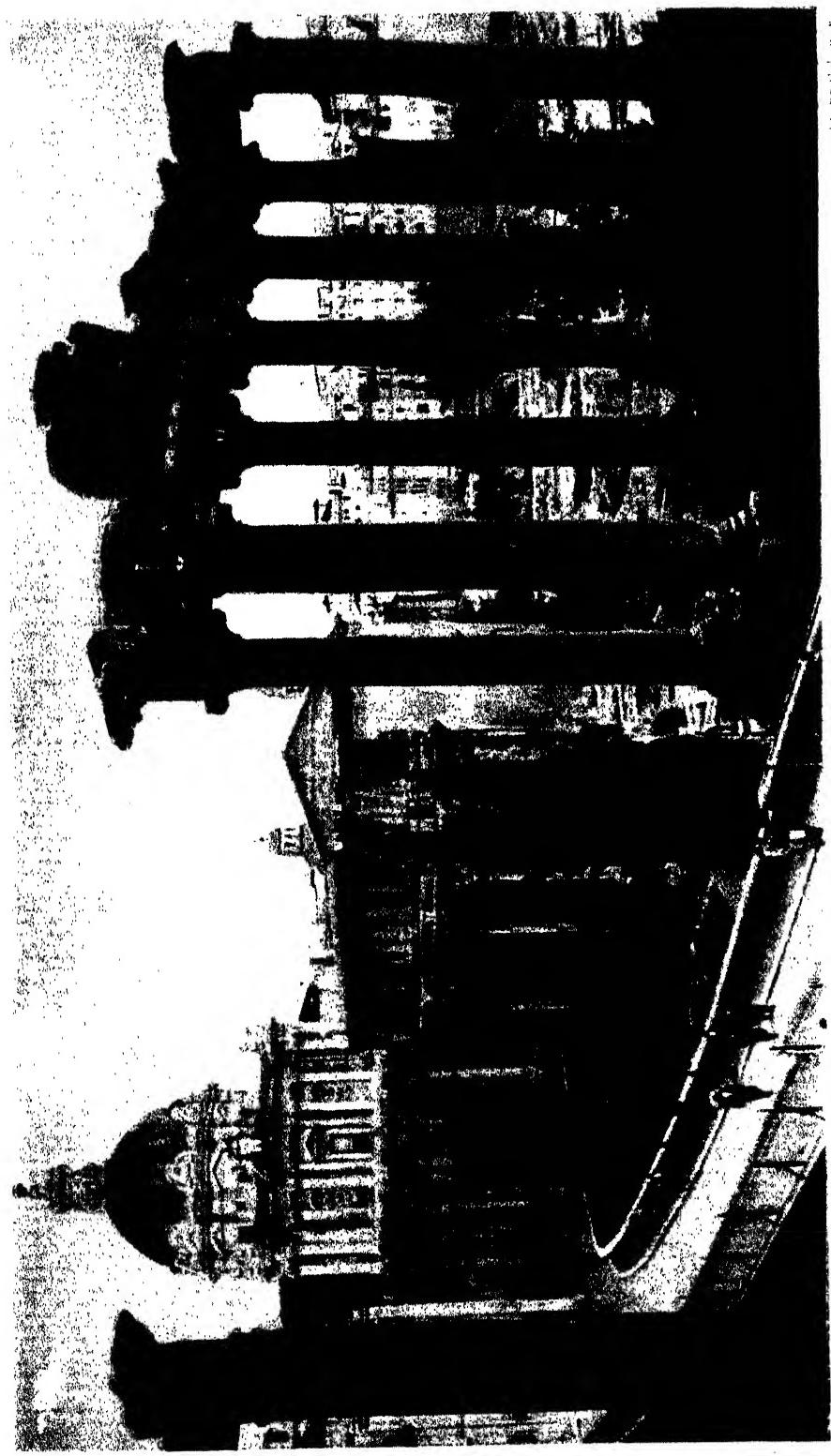




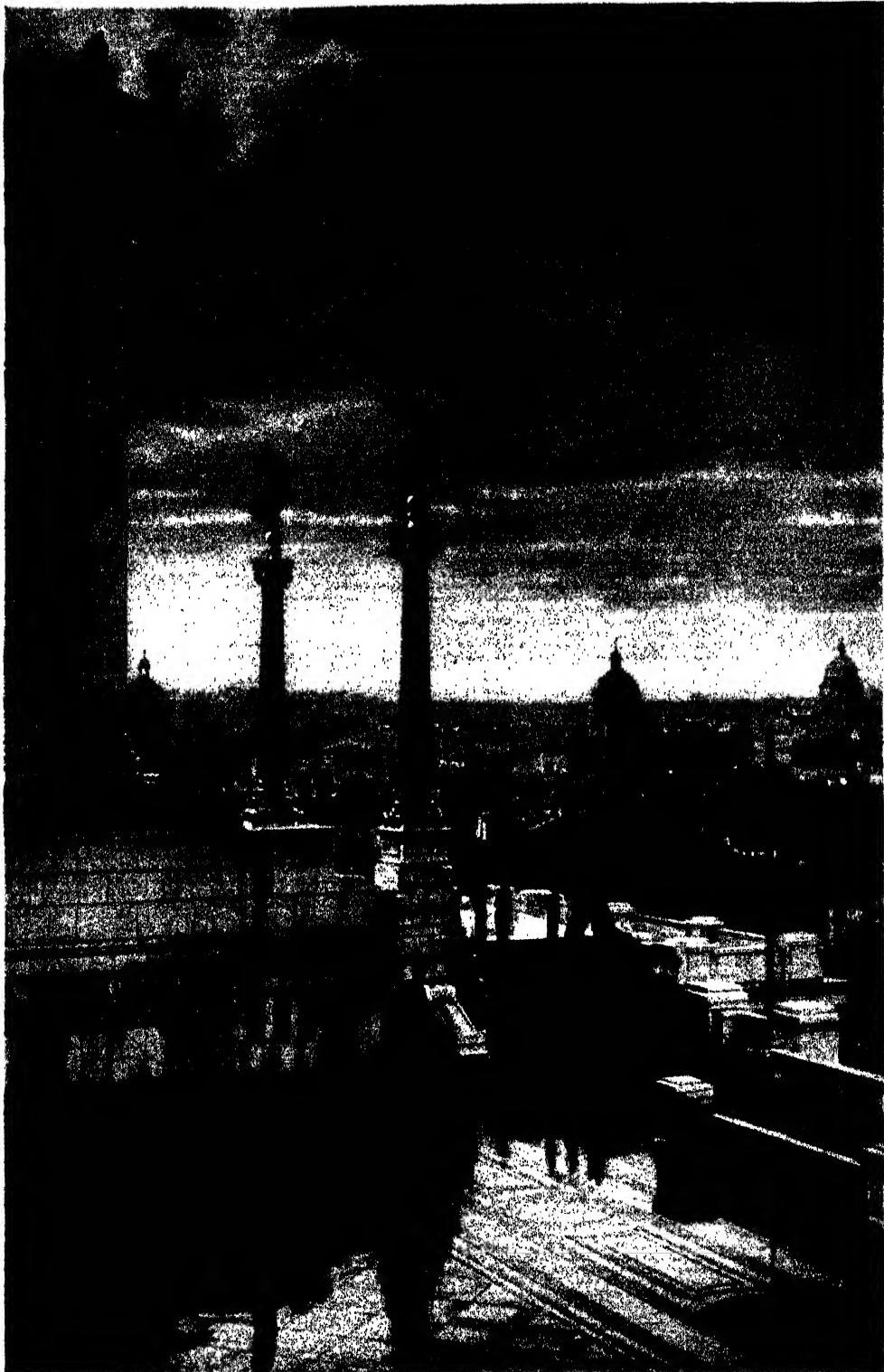
RIO DE JANEIRO. *Through a window in the woods on Mount Santa Thereza one looks down upon the roofs of the suburb of Lapa*



ROME. Beyond the buildings beyond this hill, the *Pincio*, rises the dome of St. Peter's on the farther bank of the Tiber. Here now over the gardens of *Farnese*, where Massalini, wife of Chodat, held her orgies.



ROME. On the Palatine Hill the eight columns of the temple of *Saturn* form the *domus church* of *Santa Martina e Luca*, and in between these two stands the triumphal arch of the Emperor *Sophocles Severus*.



Donald McLean

ROME. *The monument to King Victor Emmanuel II, upon the Capitol commands the city northward to S. Andrea della Valle and S. Peter's*

southward to Las Bela or Karachi, there is a comparatively open way behind the hills—but no made road.

Quetta (Kwat—a fort) is the hub of Baluchistan and one of the most popular centres of military and civil service in India. Quetta was in the middle of the nineteenth century but an open waterlogged plain surrounding a very ancient mud fort, and it was quite possible to strike water six inches below the surface. To-day, with its excellent water supply, its poplar avenues, its prolific gardens, where every fruit known in Europe can be cultivated, its picturesque bungalows and its broad green maidan, the delight of golf and polo players, Quetta well deserves its popularity.

Surrounding it are some of the most imposing peaks of the frontier hills and within easy reach is Ziarat, a juniper covered nest in the hills which makes an admirable hot weather resort. The climate would be perfect but for extremes of heat and cold. The bare rocky surface of the Baluch highland is subject to extreme radiation, with the result that the temperature may vary as much as 40° or 50° F. in the course of twenty-four hours.

Dire Results of Heavy Rain

Another disadvantage arising from a general want of soil and vegetation is that a heavy rainfall may be swept off the plateau into the narrow channels of nullahs with terrific force and cause dire destruction. The Bolan has been swept clear of all railway material more than once, the Harnai loop having been designed to outflank this difficulty.

From Quetta southwards the way lies open to Kalat and, as already explained, to the sea. South-westwards runs the uninteresting line to Nushki, now extended to the Persian border in the interests of strategy. North-westward the railway is carried over wide open spaces touching the broad acres of Pishin cultivation to the narrow Khojak range through which it tunnels its way to Chaman on the borders of Afghanistan.

North-eastward and eastward lie the interminable frontier hills permeated by rivers which, following the general strike of the limestone ranges, run northward to the Gomul and the Waziristan border. Chief amongst them is the Zhob which, after watering the Pishin valley, now affords an excellent right of way to the Gomul pass.

Home of Truculent Tribes

All this mass of mountainous Baluch borderland, more or less regular in its banded formation of ridges and ranges, is inhabited by several hill tribes, all equally truculent and acknowledging no particular affinity with the Baluch federation. They are, in fact, mostly Pathan, speaking Pushtu, but neither they nor the true Baluch, the Marris and Bugtis south of them (who are physically a splendid race of fighting men) give anything like the trouble that the British receive from the Pathans of the more northern frontier.

Raids from Baluchistan into India are almost unknown; and there are one or two good reasons for this immunity. Firstly, the military hold the key of their back doors; the approaches to the tribal country are commanded from the plateau. Secondly, there is no Afghanistan behind them to give them shelter in distress. These two practical reasons far outweigh the political influence supposed to bear on them.

The Throne of Sulaiman

The great width of mountain borderland between India and the Baluch plateau narrows towards the north as it approaches the Gomul. Here it culminates in a huge slab-sided mountain massif known as the Takht-i-Sulaiman, not unlike the Table Mountain of the Cape but slightly sagging in the centre.

A northern peak arising therefrom to 11,000 feet dominates the whole of it. From this peak (the Kaisargarh—the highest on the frontier) one can look westwards over an immense spread of Afghan hills, or eastwards into the misty shadows of the Indus valley.



T. E. Pye-Smith

JAIN TEMPLES ERECTED UPON THE SUMMIT OF MOUNT ABU

Mount Abu is the culminating point of the Aravali hills and upon it is a sanatorium of the same name which is the headquarters of the Rajputana administration. The mountain, which is over 5,000 feet high, is very irregular in formation and upon it are two groups of Jain temples, those above being at Achilgar. They are believed to date from the twelfth and thirteenth centuries.

The traditional throne from which Sulaiman's bride took her last look at India is at the southern extremity of the massif and is a famous shrine.

Especially in spring, when young shoots spread a hazy film of green over otherwise barren hillsides, and the fans at the foot of the mountain watercourse break out into a variegated carpet of flowers; when the narcissus bunches itself into shaded spots of beauty, and the land tortoise awakes and breaks up through the soil, then indeed Baluchistan becomes almost a land of enchantment. The clear blue sky above, and the sweet scent of the downtrodden wormwood below, all tend to promote a passing sense of delight in a country of which it is said that when God created the world he dumped the rubbish into Baluchistan.

There are shady spots in the sheep-dotted hills where maidenhair and other ferns are rife; many an isolated spot even in the desert where a willow-shaded spring gives relief to the thirsty traveller. The oleander, too, brightens up the waterfed gullies and rock-shadowed ravines. On the banks of the lower Hingol the oleander becomes almost a shade tree.

Of the aboriginal Baluch there is much to be said, but it is another story. Strength and chivalry are his characteristics. There is a world of romance in his history and although the days of sweeping cavalry raids are gone he is still of "the same way of thinking."

He still loves his mare better than his wife—his chivalry does not begin at home—and still acts up to his ancient traditions of courtesy and hospitality.

RAJPUTANA: GEOGRAPHICAL SUMMARY

Natural Division. The north-western edge of the Deccan. (Cf. India Southern.) The corner of the Iranian plateau. (Cf. Persia.) The ancient sea floor of the middle plains.

Climate and Vegetation. Hot desert; (Thar) the Indian counterpart of the Sahara, with a tendency to winter rains and Mediterranean climate and flora along the northern cooler Punjab edge, and to summer rains (monsoon) on the southern Gujarat edge.

Products. Crops depend almost entirely upon water. N.E., wheat, maize and native grains. (Cf. Punjab.) Water melons. Salt.

Communications. Railways necessarily cross the region to connect important centres on the periphery. In Baluchistan they are mainly of strategic importance.

Outlook. As an area of great aridity, the region has no promise of future development until sun power becomes an important motive force in industry.

RIO DE JANEIRO

The Superbly Set Capital of Brazil

by Lilian E. Elliott

Author of "Brazil, To-day and To-morrow"

AS beheld from the forest-wreathed granite peak of Corcovado, up-raised 2,000 feet above the sea, all the fantastic panorama of Guanabara Bay, with its sandy inlets, jade islands, distant blue mountains and the streaming, winding, crowding streets of Rio de Janeiro, are spread like a great coloured map.

Some cities can never be seen in their entirety but from an aeroplane, but Rio is gloriously seen from the harbour entrance, from Nictheroy, on the eastern shore of the bay, from the heights of Theresopolis, and from any of the heads of the mountains whose skirts rise from the very streets of Rio, as the Gavea, the Dois Irmãos, Tijuca; Corcovado, or from that strange cone of rock standing as a sentinel in front of Rio, the Sugar Loaf, or Pão de Assucar.

As an introduction to Rio, none of these aspects surpasses that of the Corcovado; no time better than late afternoon in mid-July. Ascend by the rack railway from Larangeiras, or by the car-line over the old Portuguese aqueduct up the Santa Thereza hill, and walk the last few yards to the bare summit itself.

Superb View from Corcovado

Directly below is a malachite-green patch, the Botanical Gardens, and the sinister black water of the Lagoon of Rodrigues Freitas, edged by a white beach, the Praia Leblon. The high air is crystal clear, the bay blue as one of Brazil's own aquamarines, dotted with islands. There is pretty Paquetá, there Villegaignon, covered with the pale walls of a guarding fort; the group where Lage builds and repairs his ships, and where factories stand; nearer the

docks is the Ilha das Cobras, once a prison and now used by the customs of Rio de Janeiro.

Beyond bay and fairy islands lies charming Nictheroy, a residential suburb of the capital, reached by a ferry steamer running every fifteen minutes. Here, in a flowery palacio, lives the president of the state of Rio de Janeiro, etiquette not permitting him to reside in Rio city, seat of the federal government. For several months in the year, indeed, the president of the United States of Brazil also leaves Rio, spending the hot season, at its very sultriest about Christmas, in the cool heights of fashionable Petropolis.

Aerial Voyage to the Sugar Loaf

Turn your eyes to the hills behind Nictheroy, blue against the pink and mauve sundown sky, and follow them round to the strange slim spires of rock rising from the Organ mountains; the tallest and most slender is the Dedo de Deus, the Finger of God.

Below, nestled in the valley under the Finger, is dreaming Theresopolis, a country village and a paradise for those who love flowers and birds. Now, before the light goes, look near at hand, where the Sugar Loaf stands in the water, with the smaller mass of Urca behind, attached to the mainland; that fiery dot hanging in the air is the lighted car of the aerial tramway crossing from Rio's foothills to the crown of the Pão de Assucar, with a half-way rest at the restaurant on Urca.

Then glance at Gavea, with his flat table-top cut out against the golden sky—a noble mountain; at the array of brother peaks of this Serra do Mar, and then down at Rio city.



NUCLEUS OF RIO DE JANEIRO ON ITS CENTRAL PENINSULA

So crowded is Rio that she has had to cut down several small hills near her shore fronts. Land was levelled when the fine docks were constructed and the Avenida Rio Branco was driven through the main peninsula of Rio from beach to beach; the latest engineering work of this kind has entailed destruction of the Morro do Castello, at the south end of the great Avenida, soil removed from the hill being used to create new land between there and the Gloria hill.

Descend into the warm night of Rio—Rio that houses more than a million and a quarter of people—descend through the woods that drape the granite mountains with tree-fern and trumpet-flower, palm and flamboyant; take one of the magnificent motor-cars and

leave the pace to your driver, who, innocent of speed limits, will race every other car, whatever your injunctions; rush out along the avenidas and praias, beautifully asphalted, generously broad, bordered with quadruple rows of Indian laurel trees and brilliant electric lights—the municipality of Rio maintains 100,000 public lamps—through the tunnel to the Atlantic beaches.

And when you have tired of the pounding surf and the rows of bizarre nouveau-riche houses, return to the always amusing, always friendly heart of the city. The "palacetes" of the new districts would startle any temperate zone city, but in the gay tropical atmosphere of Brazil a romantic style of architecture has been encouraged.

Flying staircases of white marble, gay open loggias and balconies and verandas, painted with coloured scenes, decorated with figurines, surmounted by roof gardens, are hung with burning trails of bougainvillea, scarlet passion flowers, blue convolvulus and plumbago ; and beyond and above stand the breathtaking mountains, rearing into the air such heads of fantasy that every flight of the Rio architect's imagination is rendered unremarkable.

Rio is an out-of-door night city. Everyone stays up late, despite the fact that all good Brazilians get up and take the first cup of black coffee at five in the morning ; the cool of the evening is delicious after the day's heat. The evening meal in Rio is of great length, excellence and elaboration : when it is

over one goes motoring along the brilliant sea-front, dances upon some star-lit roof, or sits out upon a balcony or gossips at an open-air café.

At midnight the city is agreeably alive. There is nothing hectic about this night life, but the newsboys are still selling late editions of "O Noite," and the scores of chairs set upon the broad pavement near the Santa Thereza "bond" station (a tram-car is a "bond" in Brazil) are filled with men who sit for hours drinking—yes, milk. Very few are drinking real drink, still fewer are smoking, but everybody is unremittingly arguing about local politics.

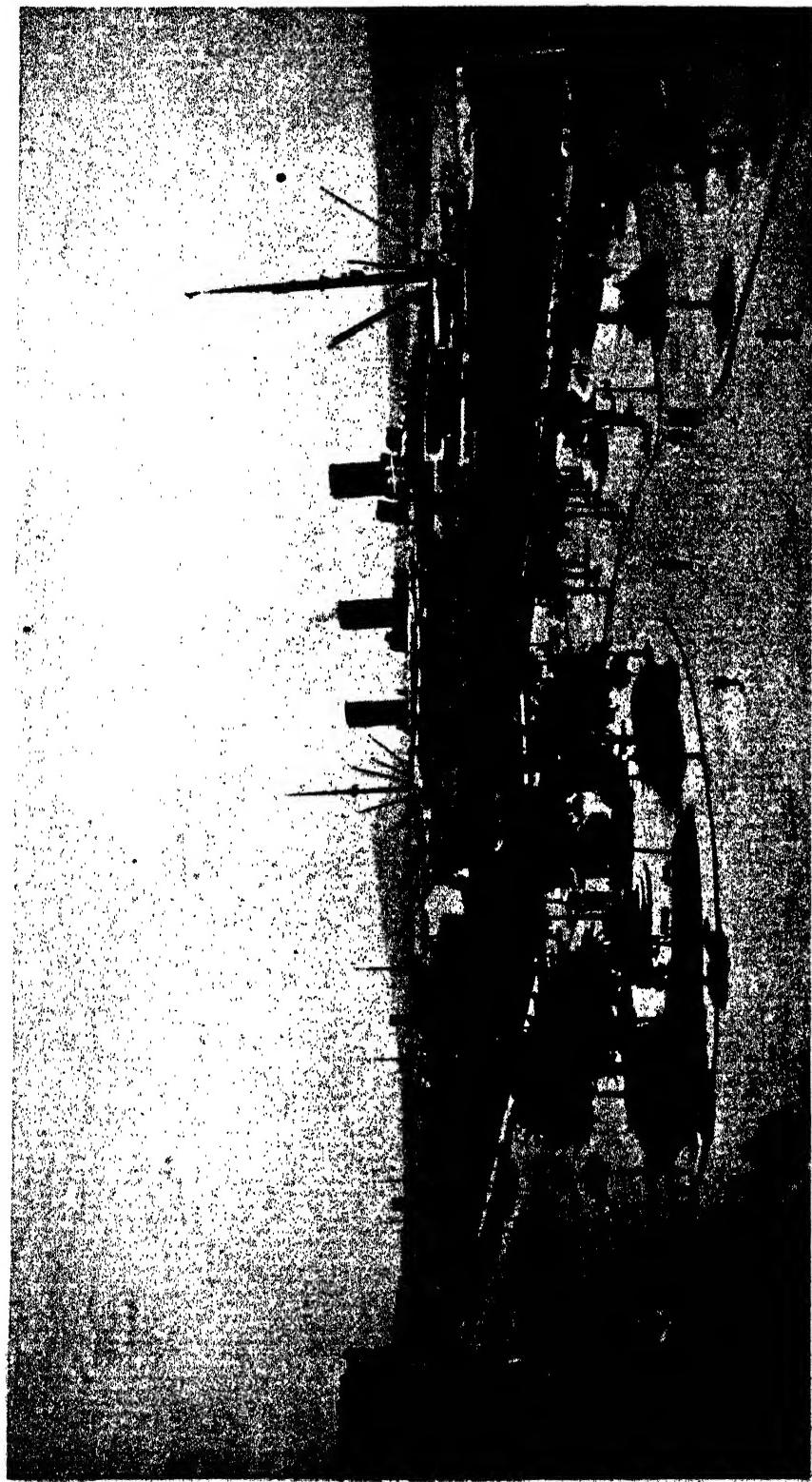
The real name of this city is São Sebastião de Rio de Janeiro. But it will never be called São Sebastião, any more than San Salvador will ever be known



E. N. A.

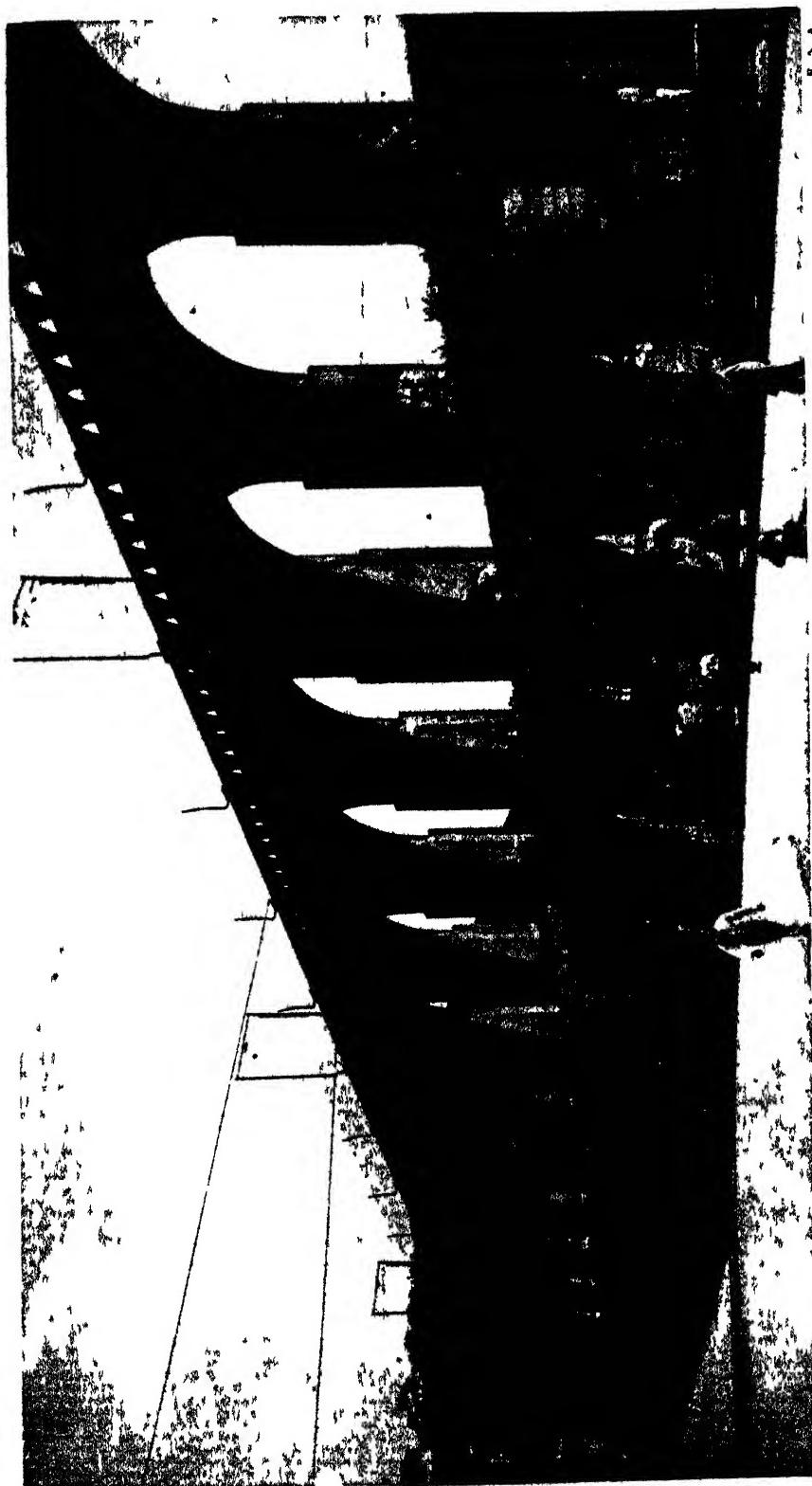
BOTAFOGO BAY TOUCHED BY ELECTRICITY'S FAIRY WAND

For some four miles a magnificent drive skirts the harbour, ending in the wonderful half-hoop of Botafogo Bay. The latter part is seen above from the side of the hill to the north-west of this inlet. The point of Corcovado rises like a tooth in the centre of this scene which is viewed again, but by day, in page 3352. It is at night that Rio really wakes up



WHERE THE GREAT LINERS DISCHARGE PASSENGERS AND CARGO IN RIO'S SHELTERED HARBOUR

The docks where the big ships berth are situated along the north end of the peninsula on which is the central part of the city, between Cabanõo point and the island called Ilha das Cobras, where there are two naval dockyards, a naval depot and a hospital. Opposite on the mainland is the Customs House with wharves on either side and a basin in front. Ships under all flags come up to these docks, which are bordered by warehouses. Some of these last can be seen to the left. Notice the number of derricks, four to each mast, on this liner, and the cranes upon the quay which are hoisting out the freight.



EIGHTEENTH CENTURY AQUEDUCT AT SANTA THEREZA THAT CARRIES RIO'S WATER SUPPLY

It was as early as 1673 that the canalisation of the waters from Silvestre to the city was begun. The reservoir is called Mae d'Aqua, Mother of Water, and several attempts were made before success was attained fifty years after. The aqueduct was built by slave labour in 1750 to carry the water between Santa Thereza hill and the heights of San Antonio, and so well was it constructed that, in 1896, it was found quite capable of being turned to a more strenuous use and a tramway was laid along it, the wires and standards may be seen above. Spes have replaced the open trough formerly used and in which the trams now run.



MOUTH OF THE "RIVER OF JANUARY" FROM THE SUGAR LOAF—

When the first explorers found this wonderful inlet in Brazil's coast, they thought, naturally enough, that they had discovered the estuary of a great river. As a matter of fact, only some small streams found outlet here. The city grew, somewhat at hazard, until in 1903 the great engineer, Pereira Passos, remodelled it not without genius, and made it thereafter the queen of South America and the pride of all Brazil.

except as Bahia. Brazilians love to elide, to shorten names, to use pet and nicknames, to coin amusing appellations. There is no public character who is referred to, even in the most dignified journals, by the whole of his name, the first baptismal name, or even a nickname, being preferred.

An excuse for this is found in the resounding extension of Brazilian names and the fact that generally the last and perhaps the two last are matronymics, while the patronymic alone is commonly used. Thus, a great man may be, officially, Astrolabio Euclides Gonçalves da Cunha Pereira, but he will be "O Astrolabio" to the press and Dr. Gonçalves to you. When, however, the great man passes to his forefathers, the whole of his name, and his title, will be bestowed upon some street in Rio.

It is no uncommon thing to see two official names, the date of one preceding the other by a few years, placarded at a corner: while the street is perennially

known by a third, older, name. How many great men have given their names to a certain narrow, crooked, delightful street, the most famous street in Rio? In vain: it remains the Ouvidor, the Street of the Judge, its houses, now nearly touching across the strait pavement, dating from the earliest days of São Sebastião de Rio de Janeiro.

While on the subject of names, note that everyone born in the capital is a "carioca"; the true native is supposed to be born within sight of the historic Largo de Carioca (a fine square with a great fountain) just as the Londoner is supposed to be born within the sound of Bow Bells. All persons native to the State of Rio de Janeiro are "fluminenses," commemorating the old mistake of the early Portuguese discoverers of Guanabara Bay, who thought they had found the entrance of a river, and called it the River of January.

As age goes in the Americas, the years of Rio are venerable, for the first



—ONE OF THE FINEST CITY SITES AND HARBOURS IN THE WORLD

In this panorama we see the Atlantic, to the left, sweeping in towards the suburbs about Copacabana, the hill of Urca in the foreground, and to the right the horseshoe of Botafogo Bay. The tallest peak rising behind it is Corcovado, 2,250 feet high. The city then stretches away to the right and on along the distant shores to the docks, which lie on the other side of the peninsula projecting out into the bay

foundation by the Portuguese dates from 1567. The coast had been charted at the very beginning of the century, the red "brasil" dyewood cut and carried to Europe for nearly three generations, and two settlements made—at Bahia and Santos—before Rio was colonised. And then the first-comers were not Portuguese but Huguenot French, brought by Admiral Villegaignon to the lovely waters of Guanabara in 1555.

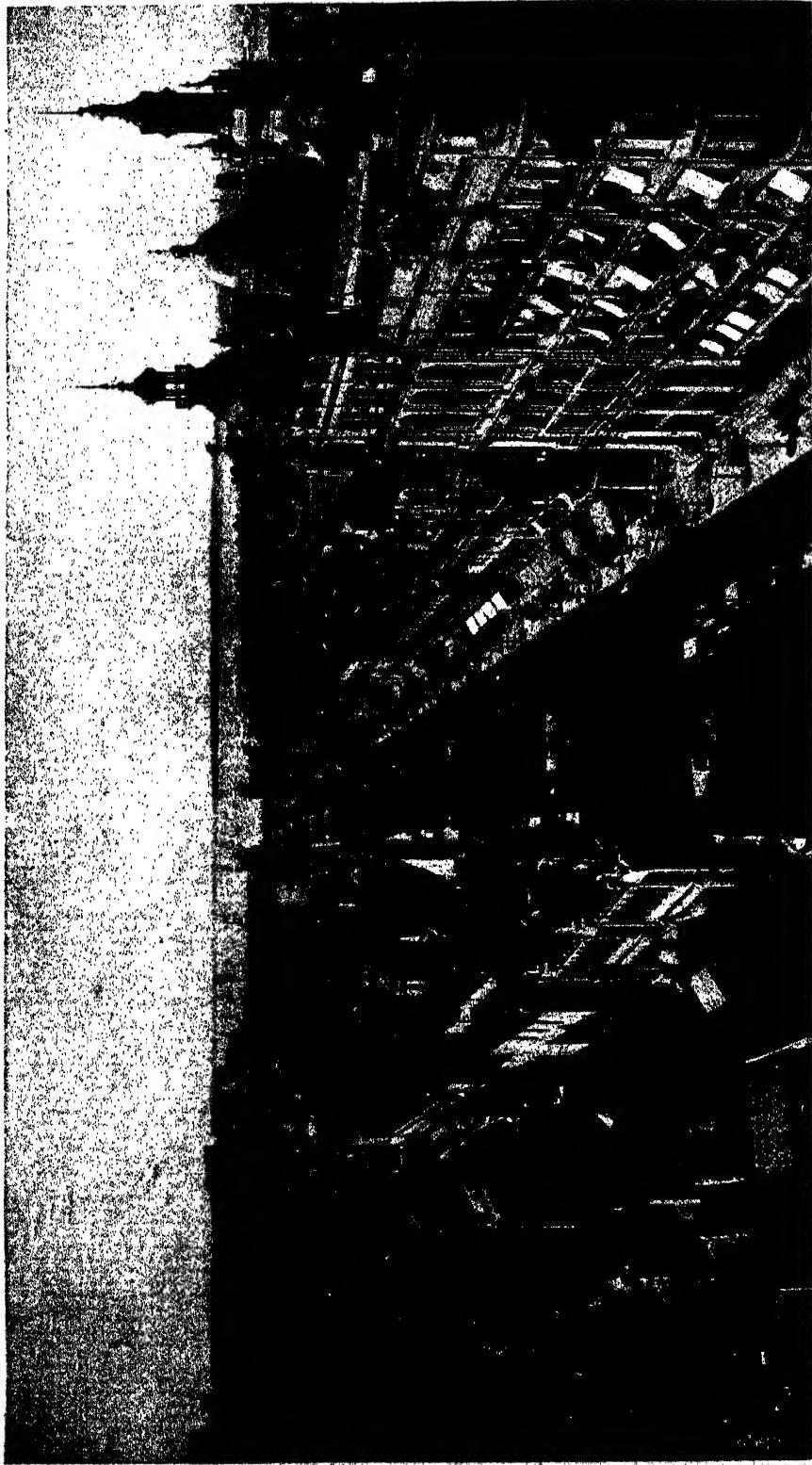
Here the new settlers floated the flag of "France Antarctique," defending themselves from Portuguese attacks upon the island still called by the name of the admiral, until they were forced to flee to friendly Indian tribes upon the mainland and were lost to history. The victorious Portuguese built a fort and brought settlers from Portugal to the Morro do Castello.

By the year 1608 Rio de Janeiro counted three thousand settlers and was made a captaincy-general—but not by Portugal; for Brazil was in the hands

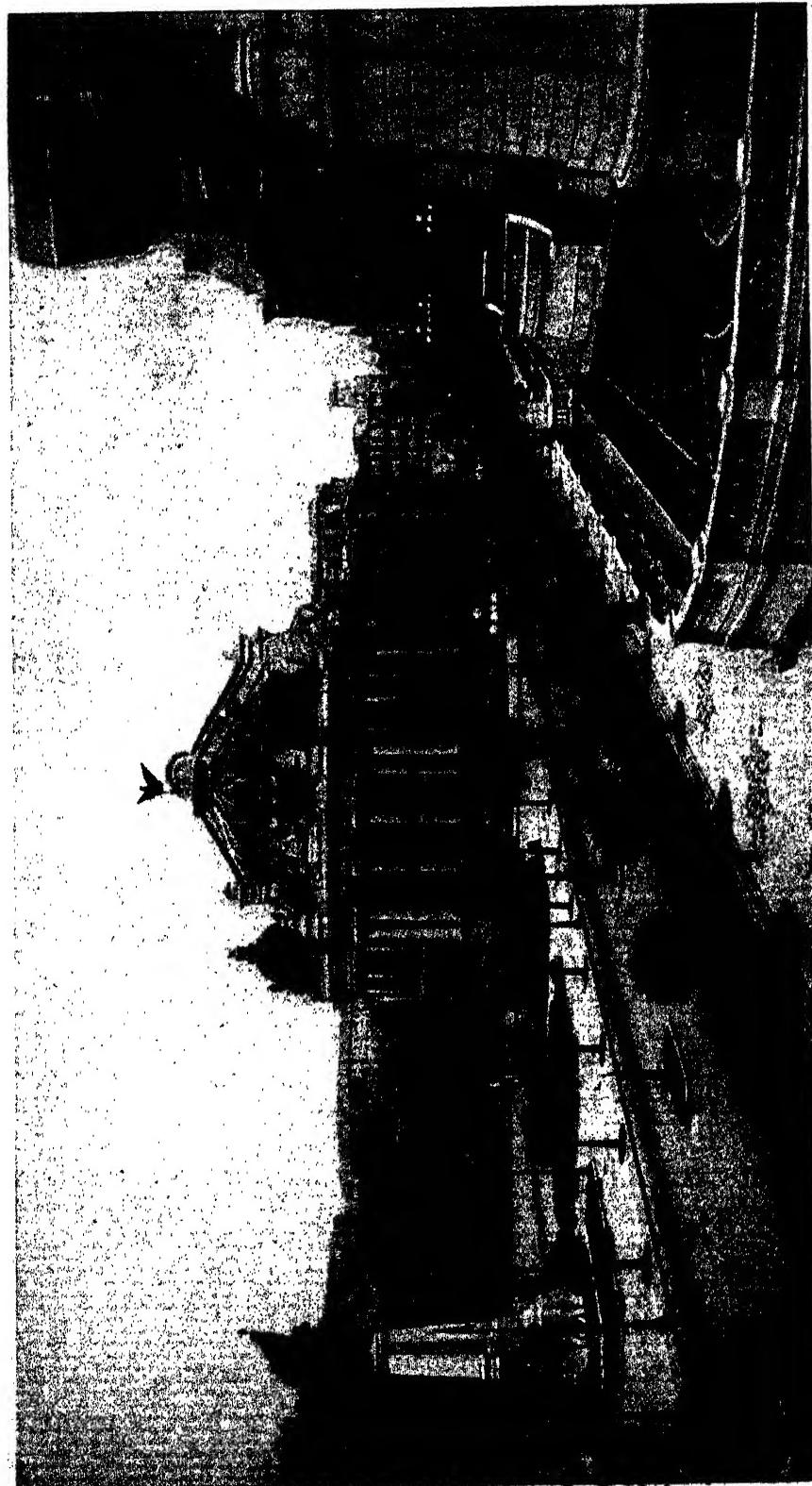
of Spain, inheritor after 1580 to Portugal and her possessions; when, in 1640, the Portuguese revolted and re-took their independence, Rio city had become an important point, free from the aggressions of the Dutch that harassed Bahia and Pernambuco, or such quarrels with the Spanish in Uruguay as vexed those great explorers, the Paulistas.

In 1710 the French admiral Duclerc brought a squadron into Guanabara Bay, and was defeated and killed; but in the following year another French fleet appeared, attacked the city, took it, held it to ransom until 600,000 cruzadas were paid, and sailed away. Since that day no hostile ship has entered the bay of Rio; but on two occasions revolts in the Brazilian navy have made the ring of mountains resound to gunfire.

In 1762 there was an energetic governor in Rio, Bobadella. He improved streets, sanitation, public institutions, built the great aqueduct that still brings water from Santa Thereza



TREE-PLANTED SWEEP OF THE AVENIDA RIO BRANCO, THE FINEST STREET IN THE CITY
This broad highway runs right across the peninsula on which the main city is built, and joins the east and west sea fronts. It is nearly 40 yards wide and over 8 miles long, and the pavements are decorated in black and white patterns. Like Kingsway in London, it displaced a lot of narrow streets, and was made in 1904 under that enterprising mayor, Francisco Passos. An electric omnibus service is in use to and from the Passeio Público, near the eastern end.



B. N. A.

FACADE OF THE THEATRO MUNICIPAL RIOS HOME OF OPERA, IN THE AVENIDA CENTRAL

In a fine position towards the south end of this Avenida, the Theatro Municipal faces an ornamental square. Some of the finest artists in the world have sung here, and the opera seasons have long been celebrated. The interior is decorated in imitation of the Grand Opera in Paris, with the whole equipment of marbles, bronzes and wall-paintings. On the outside the names of famous composers and playwrights are inscribed, those of Verdi and Goethe on the façade



E. N. A.

TROPIC PLANTS, TAME AND OUTRIOTED BY WEALTH'S EXUBERANCE

Rio is the city of the successful. On its hillsides and in the valleys one finds the gardened homes of Brazilians who have made good, and come, as if by instinct, to gaiety's capital that looks down upon the bay where it is ever afternoon. It is hardly surprising, in this place of superabundant growth, if private architecture sometimes should strangle itself with ornament

hill to the Carioca fountain, and was rewarded when the far-sighted Portuguese minister Pombal made him viceroy and Rio the capital of Brazil.

Later in the century Brazil reacted to the world-thrills of the French Revolution. In the very nick of time England, old ally of Portugal, sent warships to the Tagus that escorted, right across the Atlantic to Guanabara Bay, the Portuguese king, Dom João; his arrival in Rio marked the most successful migration of a crown in the whole of history.

In the blossomy gardens of the Gloria along Rio's sea-front are two classic stone statues; on the pedestals are carved the words: "Abertura dos Portos, 1808." For Dom João at once decreed the freedom of the ports to friends of Portugal; and, with England

in the forefront of those friends, the coming of British ships, traders and money dates from that year. Says Dr. J. M. de Macedo in his "Memorias da Rua do Ouvidor":

"In Rio the Rua do Ouvidor was one of the first to have establishments of English merchants, with shops of chinaware and textiles, and besides the trade in merchandise received from England one also began to hear, antedating 'monsieur' and 'sacré nom de Dieu,' the echoes of 'mister' and 'goddam.' English potatoes were eaten long before 'petit pois.' It was still too early for the coming of the French, then internationally excommunicated for having invaded the Kingdom of Portugal."

With Brazil firmly established as an independent monarchy, and, later, an empire, the revolutionary spirit never

showed a head again in Rio until 1889 ; and during the nineteenth century the Capital grew rich and big, spread up and along the sunny beaches and green vales, and developed as the great South American centre of literature.

Rio has produced good poets, good novelists, essayists and historians in a splendid flood ; and, all honour to her, this stream of literature is not, as so frequently happens in Latin America, an echo of the output of the Parisian boulevards, but is authentic, racy of the soil.

Despite all her civic graces, the capital used to be scourged by yellow fever, for the simple reason that until the discoveries of Manson and Ross were published the guilt of the mosquito as a carrier of the disease was unknown.

To-day, all old haunts of Yellow Jack could be, and most have been, rapidly

cleared and cleaned ; it would be a matter of six weeks or so. Rio has had a clean bill of health for twenty years. But time was when Rio still had open gutters, when the shore-fronts were swamps that bred mosquitoes by the million, and when visiting ships were more than once seen lying idle at their anchorage because every man on board was dead of the plague.

Coffee was first planted during the period of the enlightened Pedro II. ; the properties of Amazonian rubber recognised industrially ; the older output of sugar, cocoa, tobacco and cotton was presently to be superseded in value by those two great staples. And, while north and south became great earning regions (cramped and mountainous Rio state cannot rival them), the capital became and remains the great place of luxury and spending.



E. N. A.

DIZZY HEIGHTS OF THE AERIAL CABLEWAY TO THE SUGAR LOAF

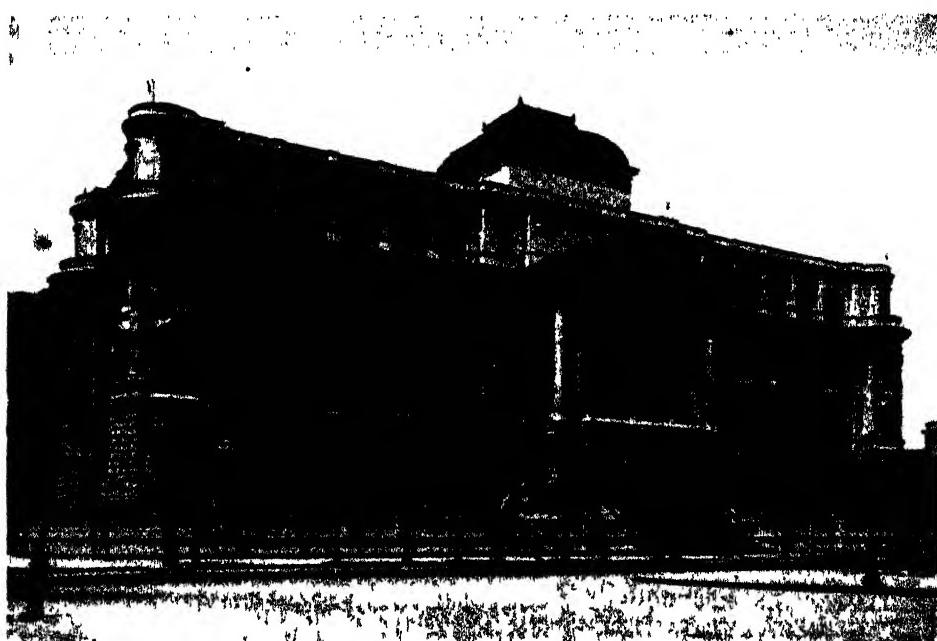
The most familiar feature in the Rio bay is the cone of the Sugar Loaf, 1,398 feet high. Only a member of the Alpine Club would attempt to climb it, and so an aerial cableway was constructed in 1912 and 1913 for others. It ascends from Praia Vermelha, Red Beach, via Urca hill, where passengers change cars, the total length being just under a mile. The journey takes about ten minutes

Entering Rio from the sea, beholding the city against an exquisite background of forest and mountain, the first impression is of extraordinary cleanliness. Nor is this impression removed by occasional discoveries of slovenly corners that escape the attention of the assiduous, white-clad street-cleaners, for this is a smokeless city, and its excellent grooming goes right down to the very edge of the water.

The docks are model docks—built in 1904, when British engineers came to

colours without fear of soiling, the pretty little women of Rio are seen upon the streets dressed in what seems to be nothing but a scrap of rose-coloured chiffon, all the gardens and parks that break the maze of streets are perennially green and full of many coloured flowers.

The great Avenida Rio Branco begins near the docks of the Praça Mauá. Its big and handsome buildings include steamship agencies, many important stores and offices, and several of the big newspapers are housed here. On



NATIONAL LIBRARY IN THE AVENIDA RIO BRANCO

E. N. A.

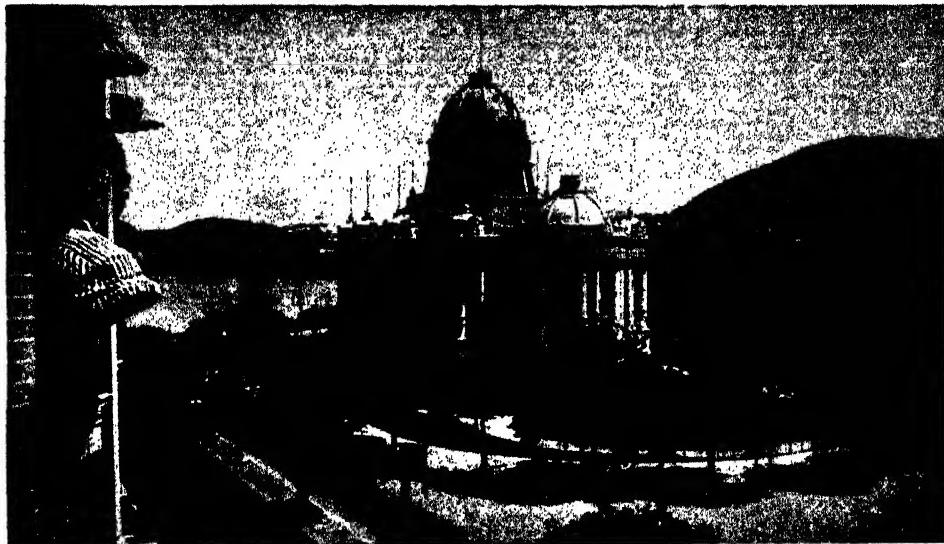
Brazil's National Library is one of the more impressive buildings in Rio's best street. Many of the city's institutions have their headquarters in the Avenida, but, among them, this one stands out as being more impressive, as achieving its effect with less effort than the rest, which tend to overdo the ornate side. It is built of granite relieved with marble

expend twenty millions sterling to bedeck and equip Rio, a satisfactory task in a city where there are no chimneys. Workshops and factories use some of the enormous hydraulic power of Brazil to turn their wheels; housewives cook with gas, made from imported coal, or electricity, or charcoal.

There is never any taint upon the pure and bright air; the sunlight seems to hang suspended in it, and one breathes and smells the all-pervading warmth. Houses may be painted in gay

the left, as you leave the docks, is the oldest part of Rio; the tangled network of ancient streets between the Avenida and the Primeiro de Março is still the stronghold of the banks, both national and foreign; the money brokers; and the offices and wholesale houses of importers and exporters.

Always the favourite of the streets that grew by themselves is the Ouvidor, with its English and French bookshops, its cafeterias where, all day long, men sit drinking tiny cups of black coffee,



MONROE PALACE WHERE THE HOUSE OF DEPUTIES SITS

Brazil's National House of Deputies does its work in the great white building at the corner of Avenida Beira Mar and Avenida Central or Rio Branco. It was copied from the Brazilian pavilion erected at the Exhibition held in St. Louis, U.S.A., in 1904. The whole is surrounded by groups of pillars after the Corinthian manner while the roof bristles with flagstaffs



ATLANTIC WHITE HORSES LEAPING THE GLORIA PROMENADE

Praia Gloria is a south-easterly continuation of the Avenida Beira Mar, between the Praia de Lapa and the Praia do Russell. The bay can be as calm as the proverbial mill-pond, but, with the right wind, heavy seas often shower their broken fragments over wall, promenade and pavement, enlivening the passage of the passing motorist and turning the street into a canal

and its resplendent jewelry houses, where magnificent pearls and precious stones are shown in quantities that would shame Bond Street. No imitation jewels are sold in Rio—my washerwoman, barefoot mulatto, carried all her savings in her diamond ear-drops, and would wear nothing second-rate.

Many fine diamonds come from the Brazilian interior, and are cut in Rio or Bello Horizonte; and one shop on the Avenida specialises in the pretty semi-precious stones of Brazil—blue aquamarines, green tourmalines, multi-coloured topazes and amethysts.

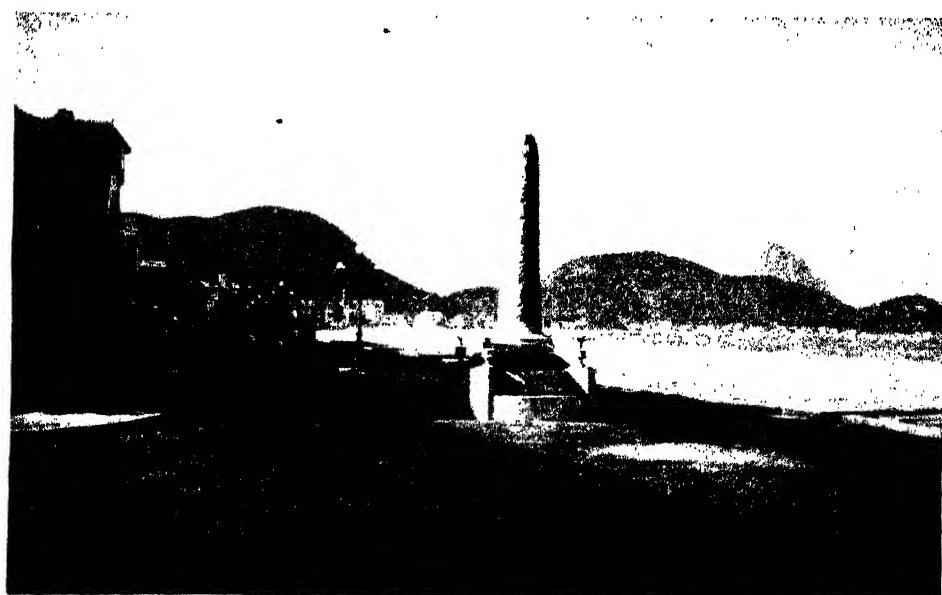
Every street corner has its itinerant news-stand. Rio reads quantities of newspapers, and there is a perfect rain of lively dailies, as well as half a dozen illustrated weeklies which display the freedom of the carioca pencil and the pungency of carioca wit. There may be limits to this freedom and pungency; but I cannot imagine at what point they are placed.

The most influential, the greatest, daily is the "Jornal do Commercio," with its tall office building on the corner

of the Ouvidor and the great Avenida; almost every notable author of Brazil has written for "*o velho*" (the "old one"). In addition to an exuberant press Rio has a light national drama, exemplified in the popular "*revistas*" always running in a number of small theatres; these topical farces frequently find inspiration in national politics, and are of an extraordinary audacity; there is a good deal of the witty "*gamin*" about the Brazilian writer of *revistas* and popular songs, of which there is a rapid succession. Rio delights in lampoons and skits, and there is no street urchin but trills the latest verses.

When you have traversed the streets of Rio, the delightful old quarters and the gay new regions, gone out to far-flung suburbs and beaches in the fine service of trams or motors, there is still much to see.

When all this has been done, you will have learned, also, something of the detached and balanced intellect of the carioca, and the eager kindness which is the outstanding characteristic of the Brazilian of Rio.



ALONG AVENIDA ATLANTICA BY COPACABANA'S BEACHES

In the distance are the heights which fringe the south side of Botafogo Bay, and which are pierced by a tramway tunnel leading to the suburbs of Leme, Copacabana and Ipanema. This promenade runs beside the open Atlantic, whose rollers, with no obstruction between here and Africa, provide a change from the often lake-like smoothness of Botafogo in the harbour.

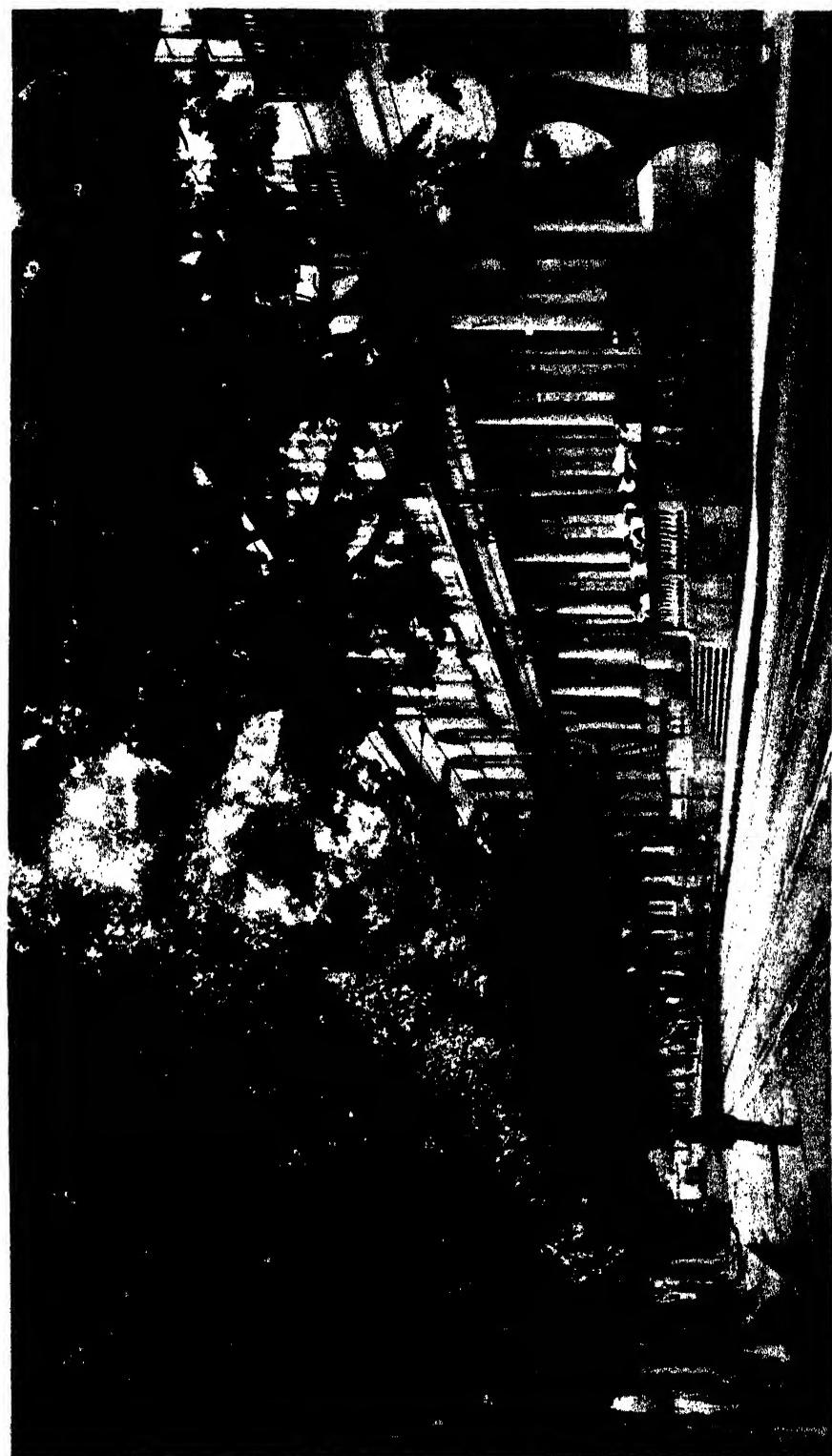


RIO DE JANEIRO. Planted with the offspring of the palm brought over in 1808, the Rua Paysandu runs to the Guanahara Palace

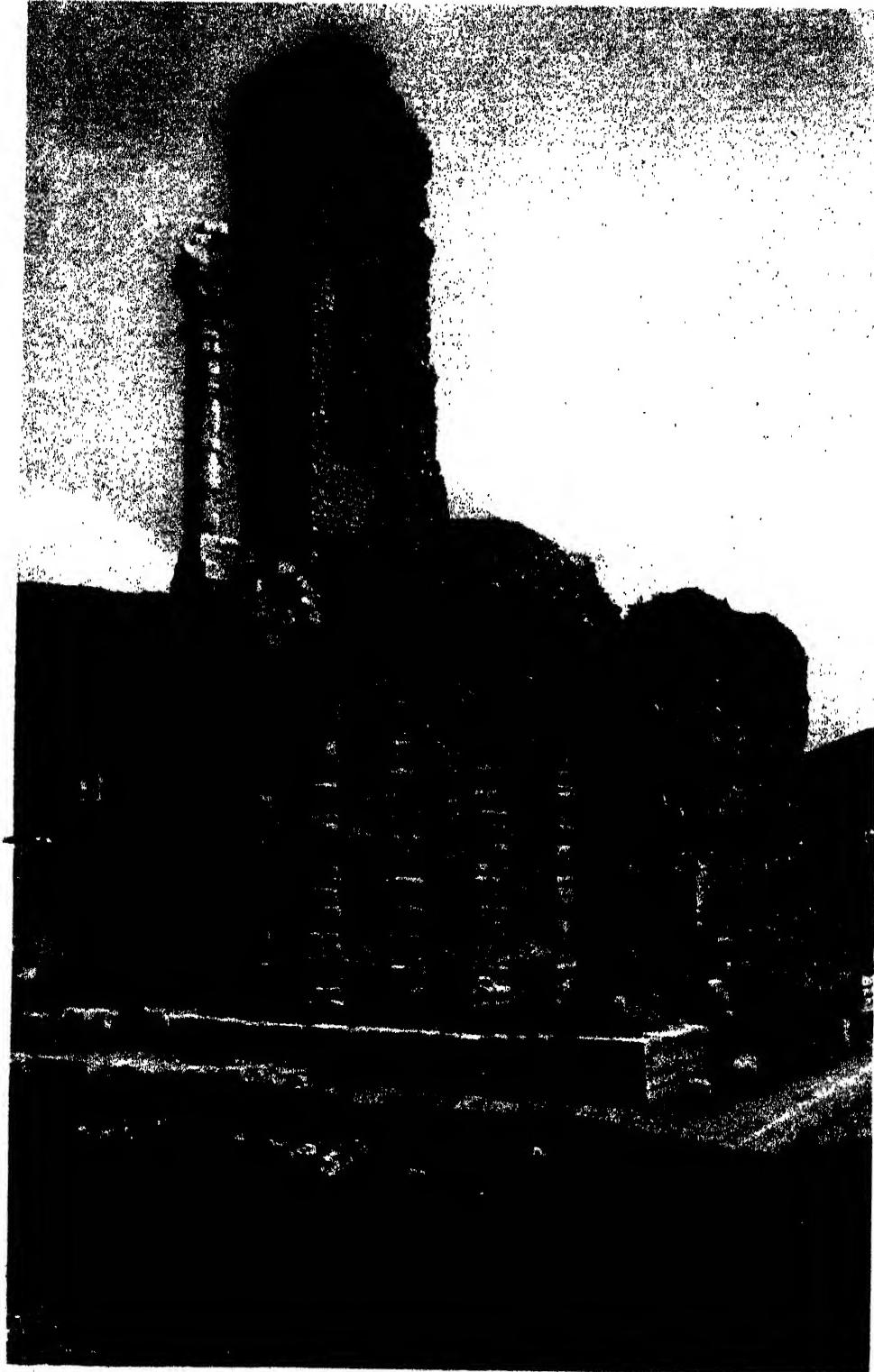
Photographs, except in pages 3374-5, E. N. A.



RIO DE JANEIRO. *The Avenida Rio Branco is the city's main street, is paved with asphalt, with side walks of stone, is over a mile long and contains some of the principal hotels, shops and newspaper offices*



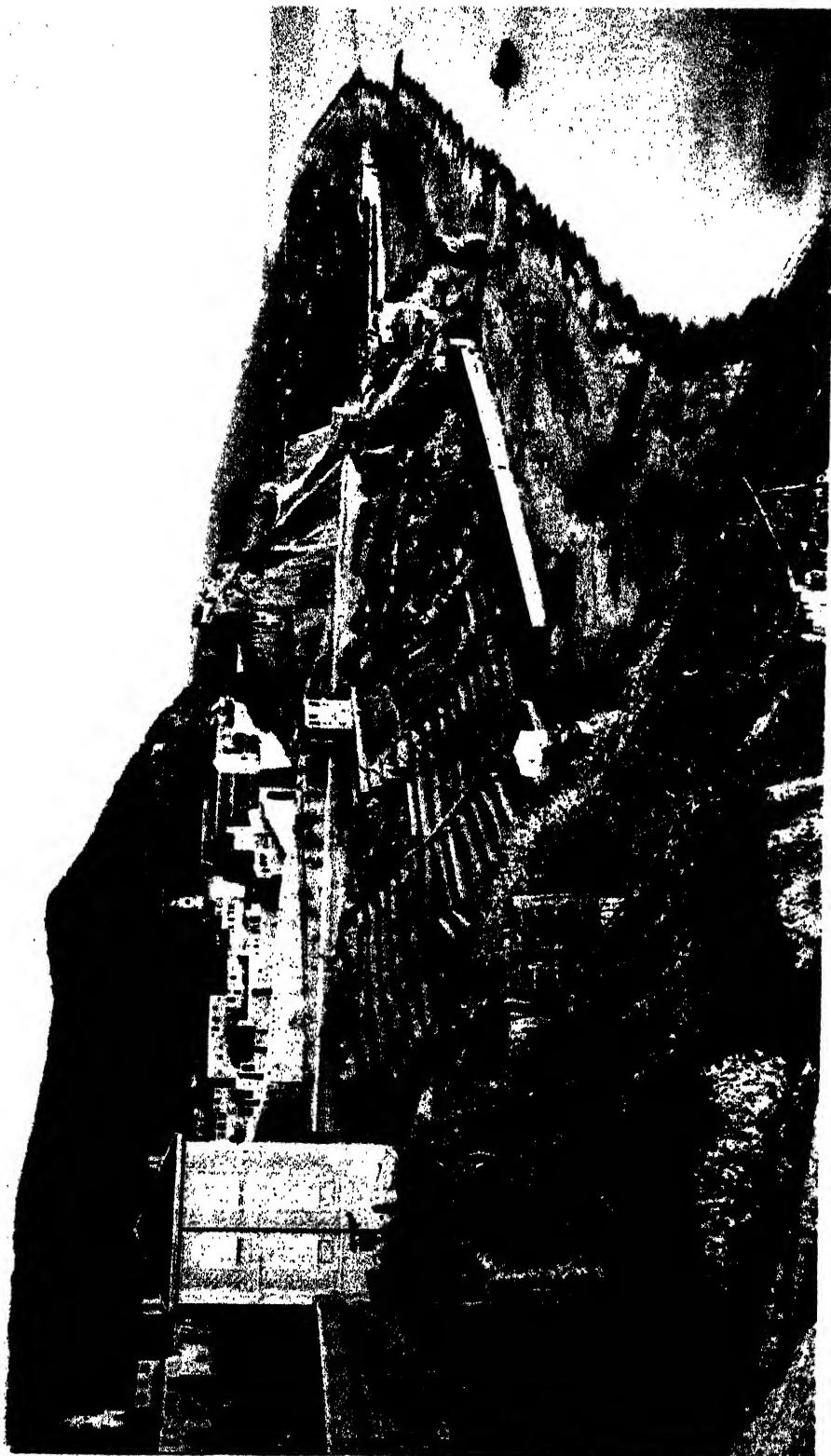
RIO DE JANEIRO. *Rua Santa Luzia runs from Calabouca Point to the Avenida Rio Branco. On the right is the Hospital da Santa Casa de Misericordia with some white-capped sisters on the porch*



RIVIERA. *The Tour d'Auguste at La Turbie was built in 6 B.C. to commemorate the Roman conquest of the Alpine tribes*



RIVIERA. On the Moyenne Corniche between Nice and Monaco
there is a wonderful view of Eze and its castle perched on a crag



RIVIERA. At Ventimiglia the traveller from France into Italy passes through the Customs. On exploring the town he will find an old castle, a cathedral and a pleasant but active trade in flowers.

RIVIERA. The naval station at Villefranche-sur-Mer, to the east of Nice, has one of the finest roadsteads in the Mediterranean, sheltered between the two peninsulas of St. Jean and Montboron





Mentone, the last French town, spreads itself along two bays. The one curving towards Italy, seen above, is the Baie de Garavan



RIVIERA. Off Cannes are two islands, Les Isles des Lérins, and on the smaller, St. Honorat, is a Cistercian abbey founded in 410

RIVIERA

Sun-favoured Shores of France & Italy

by Gordon Home

Author of "Along the Rivieras of France and Italy"

RIVICERA has come to be a geographical expression for any definitely confined shore, especially if it faces the south with an ample allowance of sunshine; but although maps hardly recognize the name, it is instantly associated with the Mediterranean shores of France east of Toulon and the Italian coast between Ventimiglia and the Arno.

The Rivieras together measure some 250 miles in length and fall into three sections: first, the Côte d'Azur between Toulon and the Italian frontier a little to the east of Mentone; second, the Riviera di Ponente (Western Riviera) from the frontier to Genoa; and, third, the Riviera di Levante (Eastern Riviera) from Genoa onwards.

Before 1860 all the Riviera east of the Var, which is a little to the west of Nice, belonged to the Kingdom of Sardinia, and it was therefore, politically, as it is geographically, almost a single entity. Even now, although different languages are spoken, the race inhabiting the region is practically of the same stock throughout. This statement, of course, does not apply to the cosmopolitan element of the new floating population, which fills the villas and hotels strewn along the mountain slopes between Hyères and Alassio and from Genoa to Spezia.

Short, Deep River Valleys

The Riviera consists of the abrupt seaward declivities of the Maritime Alps and the Apennines. Along the Riviera di Ponente this slope is broken by short and deep transverse river valleys which sometimes can be traced below sea-level, indicating a process of settlement which is not yet complete as occasional

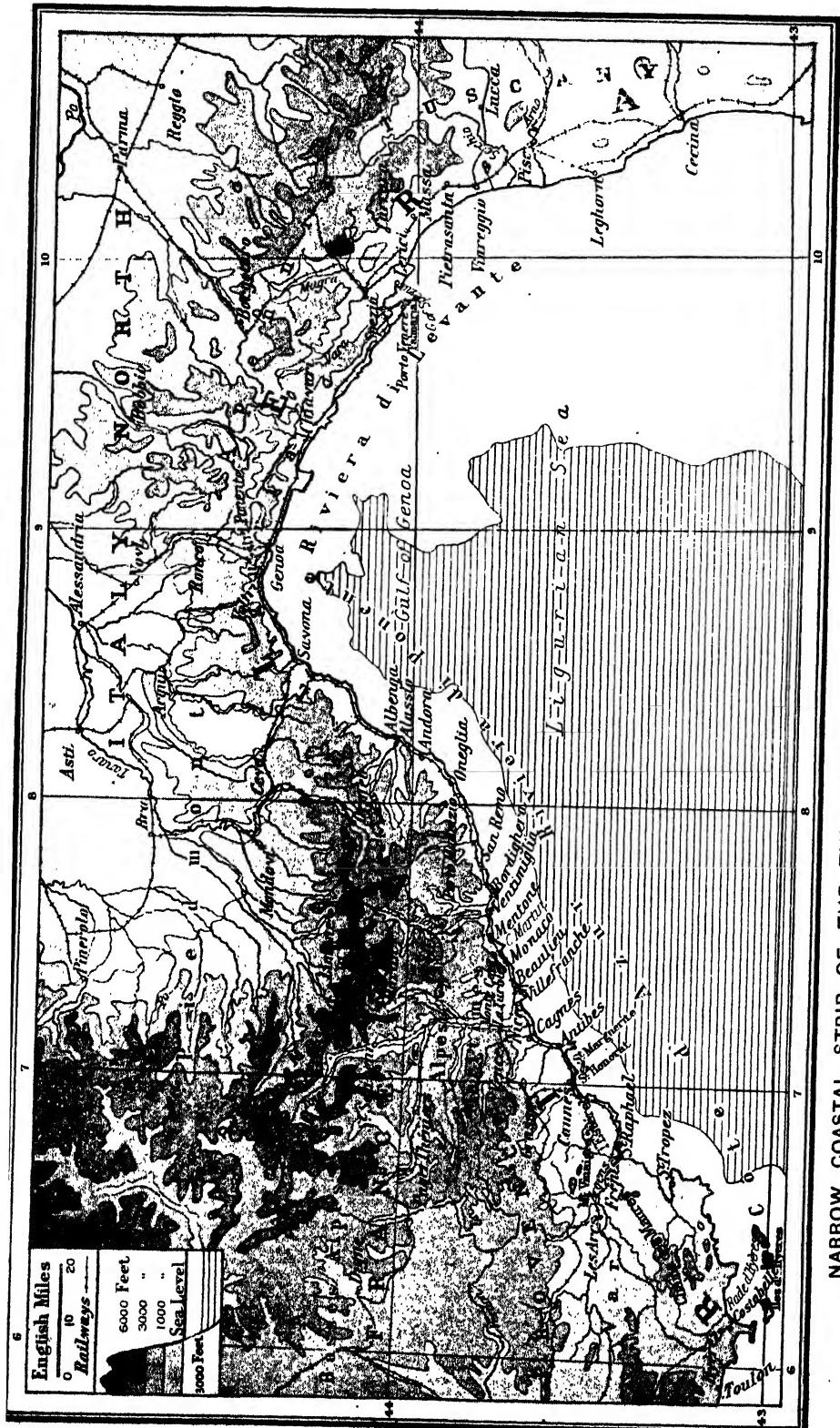
earthquakes testify. In the Riviera di Levante almost all the rivers flow parallel to the coast, only turning seawards within a few miles of the shore.

Often there is no shore in any sense of the word, the mountains descending to the Mediterranean in exceedingly steep slopes or sheer precipices, especially between Villefranche and the Italian frontier. Thus rivers naturally partake of the nature of mountain torrents and are generally seen as dry expanses of grey shingle and boulders.

Scenery Grandly Beautiful

The scenery is almost unrivalled for its variety and colour and the striking beauty of its mountain steeps. The lower slopes are often densely wooded with many varieties of trees. Along the coast the palm has been successfully introduced. Bold and impressive rock promontories alternate with hills clothed in dark green foliage and richly cultivated valleys, while almost every town occupies a situation of romantic charm. The villages are, as a rule, perched in the most inaccessible positions on hill-tops and sometimes above prodigious ascents of almost wall-like rock faces.

Two great mountain systems enter into the geological economy of the Riviera—the Alps and the Apennines. From the Maritime Alps extend westward the secondary systems of the Chaine des Maures and the Estérel Group. The Maritime Alps and the Apennines are principally composed of limestone, geological formations of the Tertiary or Cretaceous Age. The Chaine des Maures is in part granitic, partly of schist, gneiss, porphyry and crystalline rocks, while the Estérel is a formation of eruptive trap with huge





E.N.A.

COMMUNAL DRYING-GROUND OF THE GENOESE LAUNDRYWOMAN

In striking contrast to Genoa's broad, modern thoroughfares are the narrow, steep streets with badly-built, many-storeyed houses of the old town. The inmates of the crowded houses in these sombre lanes utilise to the full the scanty light and air, and a sight such as this, where laundry is drying on lines slung high above the cobbles between the mouldering walls, is by no means uncommon

masses of red porphyry running out in promontories into the Mediterranean.

The Maritime Alps are much higher, but the most elevated summits are not upon the coast. Behind Nice and Cannes they culminate in peaks of nearly 6,000 feet. The Ligurian Apennines are generally rather lower, though on the Riviera di Levante there are summits of over 5,000 feet snow-capped during half the year. The numerous streams bring down from the

mountains an immense amount of detritus, but the value of this is less than might be expected. The reason is that in their courses these streams are so rapid that there is no time for the stony masses which they sweep with them to be pulverised and converted into alluvium. Until it was embanked, the torrential Var was indeed a curse rather than a blessing, rolling down rocks and stones in such masses that they were deposited in



Donald McLeish

PANORAMIC VIEW OF GENOA, ITALY'S CHIEF COMMERCIAL SEAPORT CITY, AND ITS MAGNIFICENT HARBOUR

The name Riviera is given to a coastal strip stretching for about 140 miles east and west of Genoa, including the Riviera di Levante, the Riviera di Ponente and the Côte d'Azur. Standing at the head of the Gulf of Genoa, the city from its attractive position on an amphitheatre of hills and its handsome old palaces has been named La Superba. Famed as a great maritime city in the Middle Ages, Genoa is still Italy's leading seaport, and its immense harbour, covering some 550 acres, consists of the inner and the new harbours and a naval harbour, which are protected by moles, a marine arsenal, and graving, dry and floating docks.

banks near the coast, destroying instead of promoting fertility. On the lower valley slopes the deposit during the ages has created a bank of fertile soil; above this the hillsides are terraced.

It was owing to the discovery of the singularly happy situation of the Riviera towns and villages in regard to sunshine and warmth that this strip of coast began to be famous early in the nineteenth century. The towering mountain masses, leaping to great heights from the very margin of the azure waters of the Mediterranean, face the southern sun and are, as a rule, very thoroughly protected from the cold blasts which sweep from the snow-covered peaks of the Alps. The result is that the average winter temperature is so much higher than in other districts of the same latitude that this coast has no rival in Europe in equability of climate.

Mistral instead of Fog and Snow

The most serious interference with these singularly fortunate climatic conditions is the violent and cold wind from the north-west, known as the mistral. In the western Riviera of France it is at its worst in March and April, carrying with it a certain amount of fine dust. As one goes eastward it becomes less apparent, and owing to the protection of lofty mountains close to the sea, the wind can often be observed striking the waves a mile or two from the shore.

Generally the climate of the whole of the Riviéras is warm, with very little variation in temperature. At Cannes the mean winter temperature is 48° F., and that of summer 75°. There is no fog, snow is the rarest occurrence, and the temperature in mid-winter does not fall below freezing point. The amount of rainfall varies in the different parts of the coast.

In Italy the mistral is called the tramontana, and it diminishes in severity until, in the Riviera di Levante, its force is slight. An east wind prevails in the neighbourhood of Nice at different times during the six winter

months with a total of five or six weeks, making it necessary to take precautions against exposure, and in winter and spring there is always a certain danger after sunset. The contrast between sunshine and shadow is very marked.

Infrequent but Heavy Rain

Rain is more abundant on the Riviera di Levante than in the western parts and the Côte d'Azur, where the average total of days when rain is recorded in the year does not exceed eighty-five against about double that number in England. The falls are often very heavy, ranging from one and three-quarters to as much as three inches in twenty-four hours. There are records of over six inches in that time, and in October, 1872, no less than 20 inches fell at Genoa in one day, and over 31 in the month; yet Genoa only averages sixty-seven rainy days in the year.

On the higher declivities of the mountains grow dense forests of pine, interspersed with evergreen oaks, and where there is no terrace cultivation one finds juniper, lentiscus (Spanish broom), privet, cistus, climbing asparagus and the pistachio often growing in picturesque confusion. Olives are extensively cultivated on the lower slopes, and below or among them are found the vine, orange, lemon, citron, mulberry, pomegranate, chestnut, carob, plum and other fruit-trees. The picturesque stone or umbrella pine, and the maritime pine with its contorted trunk, grow freely.

Imported Trees and Plants

All kinds of imported trees and plants flourish on the Riviéras, from the date-palm and sugar-cane to the Australian blue gum and the pepper-tree. The San Remo district has grown palms for a thousand years past. American cacti have for many years been one of the commonest features of this coast, enclosure walls being very frequently topped with them, while the decorative candelabra of the agave flowers form one of the most familiar features of the

Riviera foregrounds. Plane-trees are planted along the main roads at Mentone and elsewhere, and are greatly valued for the ample shade which they cast.

Except for two months in mid-winter the Rivieras are brilliant with flowers, roses and carnations being cultivated in great quantities for export and the manufacture of perfumery.

A few wild animals are still at large in this littoral. They include the wild boar, hunted at the present day in the Estérel; the wolf, which is being more and more restricted to the inaccessible regions; and the chamois, whose numbers have been much reduced by hunting and will doubtless follow the ibex into extermination in course of time. Among the smaller animals are the dormouse, the mole and the weasel. One of the commonest features of walls and rocky slopes are the green lizard and the gecko, while tree frogs and green frogs occasionally make the night hideous.

Among the domestic animals of the Riviera, the ox shares with the horse, mule and ass the work of transport. In

the Carrara marble-quarrying district the slow-moving ruminants can be seen in very long teams drawing heavy blocks of marble on sledges. Sheep are bred primarily for their wool, and the pig and goat for edible purposes.

Owing to ruthless destruction for the larder, the native wild birds have come very near to extermination. In spite of this there are still songsters where any security can be found. In the interior a few eagles and flamingoes still survive, and the red-legged partridge is fairly common. Birds of passage include the swallow, swift, sand martin, nightingale, hoopoe, cuckoo and quail. Butterflies are numerous, and less pleasing creatures are scorpions and the mantis.

The Ligurian Apennines have been famous since classical days for their white and other varieties of marble. Throughout the French Riviera the mining of metals is on a very small and dwindling scale, the only mineral that is actively worked being bauxite, which is utilised in the production of aluminium and is found in the



E.N.A.

SUNNY CANNES, ONE OF THE CHOICE WINTER RESORTS IN EUROPE

In the department of Alpes-Maritimes, some 18 miles south-west of Nice, lies the beautiful town of Cannes, far-famed for its equable climate and lovely environs. The tranquil beauty of the bay, about whose blue waters fishing-smacks with huge white sails flit like fantastic sea-moths, is viewed to best advantage from Mont Chevalier, around which the old town clusters in the background.



Ewing Galloway

CASINO OF MONTE CARLO, FAMOUS CONTINENTAL PLEASURE PALACE

The magnificent building of the Casino at Monte Carlo provides amusement and recreation of almost every kind, but is principally noted for its gaming tables at which roulette and trente-et-quarante are chiefly played. Built in 1878, it is decorated with a wealth of statuary and paintings, and has undoubtedly helped to establish the town's reputation as one of the most frequented resorts.

department of the Var. The stone quarries are extensive and numerous.

The fishing industry is locally important, Genoa and Nice requiring a large supply. Villefranche is the chief fishing port on the French Riviera and supplies Nice with its requirements in this respect. The boats are built at many places along the coast and are very conspicuous on the open shore between Savona and Genoa.

Forests are controlled by the national governments concerned, whose activities, however, seem unable to prevent periodic fires on an extensive scale which leave large areas gaunt and blackened.

Agriculture is carried on extensively in spite of the formidable difficulties presented by nature, a very considerable proportion of the cultivated land being produced by terracing, often on very steep slopes. Wheat, barley, rye, potatoes, and leguminous plants such as leeks, garlic and onions are the staple crops which employ the majority of those who do not live in the towns. Most of the production is consumed locally.

The manufactures of the Riviera are peculiarly different in their nature. Those in the Côte d'Azur are mainly scent, soap, crystallised fruits, jam, potted meats, olive oil, glazed and unglazed pottery, building materials, salt and calcium carbide. Nice and Grasse are the two towns which can be said to possess a manufacturing quarter. The latter town in the hills above Cannes has twenty-five perfume factories consuming over three million pounds of roses annually.

The salt-producing marshes border the shallow Rade d'Hyères and the Estérel provides the bruyère roots for the production of "briar pipes" for export. Nice has factories for inlaid flooring and olive oil as well as for preserves and perfumery.

On the Italian Riviera di Levante are to be found two of the most important ship-building and naval construction ports in the Mediterranean. Genoa with its busy suburb of Sestri Ponente builds and equips all kinds of ships from Dreadnoughts down to motor-boats,

while Spezia is a government dockyard which also builds and repairs warships of all classes for the Italian navy. Apart from this very important national industry, the Italian portions of the Riviera produce little besides local manufactures such as soap and olive oil.

Simple Railway Communication

The railway communications of the Riviera are of extreme simplicity, consisting of a standard gauge railway entering the western extremity at Fréjus and thence skirting the whole coast-line as far as Pisa, whence it continues as one of the main routes from Paris to Rome. From this trunk line there branch off four routes through the Ligurian Apennines linking the otherwise nearly inaccessible coast-line with the northern plain of Italy.

The most westerly runs from Savona by Ceva and Cherasco to Turin; the second from Voltri by Acqui and Asti to the same town; the third from Genoa to Novi, a junction for Milan, Alessandria and Turin; and the fourth leaves Spezia for Parma and Venice. There is also a branch to Grasse from Cannes. A few narrow gauge lines have been built on the French Riviera. One of them links Fréjus with Hyères, running along the exceedingly picturesque shores of the Chaine des Maures, while another leaves the trunk line at Les Arcs and reaches Grasse, Vence and Nice.

Along the Corniche Road

Broadly speaking, the Rivieras possess little in the way of roads besides the Corniche, the great highway which has been engineered along the coast, but between Nice and Cap Martin there is the upper Corniche which gives a magnificent alternative to the lower level.

In the valleys there is always one good and well-built roadway suitable for all sorts of traffic. The dust, which before the days of motoring was a positive curse, has to a great extent been overcome by the use of tar. Tramways follow the coast-line between Nice and Mentone and are to be found in the

larger towns throughout the Rivieras. The villages of the Riviera are remarkable for their picturesque positions, perched high up on summits of hills difficult to approach, the sites having been almost invariably selected from the point of view of defence from attack.

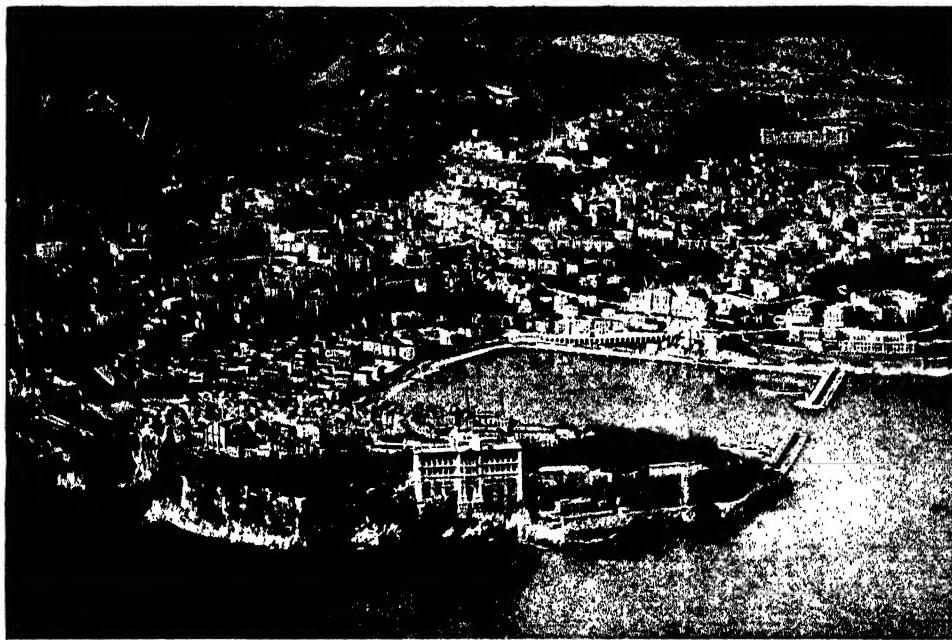
The houses are clustered together with extreme compactness, and it is usual to find that the steep paved passages, which often become flights of broad, cobbled steps, are completely built in for considerable distances, and even where they are open to the sky the narrow spaces between the houses are bridged across with rough stone arches which help to prevent serious damage during earthquakes.

Towns Walled against Corsairs

The Riviera towns, in the early days before the coast was developed as a series of health resorts, bore striking resemblance in their main characteristics to the villages just described. Being on a larger scale, they had their piazzas and one or two open thoroughfares, but they had all found it necessary to wall themselves in owing to the hazardous conditions of life in the Middle Ages and long afterwards, while the Barbary corsairs were still able to make their sudden descents upon unprotected places along the coast.

A good deal of reconstruction has to some extent robbed the old nuclei of French Riviera of the more striking features of this period; but as one goes eastwards from Mentone, the more antique portions of the towns still retain in a most remarkable fashion the characteristics of the stormy years through which they have passed. Thus, old San Remo remains to-day a shadowy labyrinth, still busy and still populous, in whose devious ways a stranger can easily lose himself, and only finds his way to the open spaces by invariably selecting the passage or roadway which is leading upwards.

If one begins a journey at the western extremity of the Côte d'Azur, the first town of any consequence is Hyères.



Aeroflms

AERIAL VIEW OF MONACO'S CAPITAL AND ITS ADJOINING TOWNS

The small independent principality of Monaco covers an area of eight square miles and lies, between Nice and Mentone, basking in southern sunshine beneath the precipitous walls of the Maritime Alps which bound it on three sides. The promontory is occupied by the town of Monaco, the capital, with its huge marine museum; beyond lies La Condamine, while on the right is Monte Carlo.



Aeroflms

NICE FROM THE AIR, SHOWING THE FASHIONABLE COAST PROMENADE

Among the lovely resorts which stud the narrow coast-land between Fréjus and Leghorn, Nice has pride of place, and the main occupation of this beautiful city is catering for the numerous invalids and pleasure-seekers who yearly throng to its sunny shore. In the foreground the Promenade des Anglais leads to the jetty, and behind the public gardens is the columned façade of the Casino.



E. N. A.

SHELTERED BAY OF PORTO VENERE ON THE RIVIERA DI LEVANTE

At the extremity of the promontory facing the island of Palmaria, from which it is separated by a strait 160 yards wide, Porto Venere lies on the bay of the same name off the Gulf of Spezia. Above the quaint high houses clustering thickly along the rocky shore are the well-preserved fortifications which, built by the Genoese in 1113, have withstood onslaughts by Spaniard and Neapolitan

pleasantly situated on steep sloping ground overlooking the extensive salt-pans for which the neighbourhood has long been famous. Near by, on the sea itself, is the newly established "plage" of Costabelle. About nine miles away, and some two miles from the coast, is the picturesque group of the Iles d'Hyères. St. Raphael is quite a small place which has become famous as a health resort, having hotels built in the dense pine-woods on the hills above.

From being quite a modest town, Cannes has grown into one of the chief resorts of the French Riviera, with a population of some 30,000. Being well protected from the force of the mistral, the place has become more and more recommended for those suffering from pulmonary complaints. It is full of shady trees and beautiful gardens, and in the spring and early summer the scent of its flowers and fruit blossoms fills the air as one makes one's approach from the interior.

Upon an almost isolated rock just above the harbour stands old Cannes, much as the ancient site of Nice dominates the modern city which has grown up around it. The pine-clad islands of Ste. Marguerite and St. Honorat are about two miles off the coast. They are both of them clothed with pine-woods, and upon the former is the fort built by Richelieu, which has often been used as a state prison. Antibes has a small port close to the exceedingly ancient nucleus of the town. It was one of the Greek colonies established on the Ligurian coast.

Nice has grown to such an extent that it has become one of the largest cities of France, with a population of about 156,000. It has broad streets of stone-built houses, and contains a large number of hotels, restaurants and first-class shops. Excluding the sea front, the town has a singularly Parisian aspect, and it might almost be termed Paris-by-the-Sea. Not only is Nice a

small city devoted to a large extent to pleasure, but it is also a health resort, and is in addition a place containing quite a number of small manufactures.

Its outskirts are famous for their well-designed villas, luxuriously appointed, and standing in exceedingly beautiful gardens. The climate is mild and pleasant, but has also an exhilarating quality which is not suitable for nervous temperaments.

Villefranche is spread along the steep shores of a most beautiful and deep bay, about a mile in length, capable of affording anchorage to the whole navy of France. It is from Villefranche that the fishermen sail who provide Nice and the neighbouring parts of the coast with fish. The steep slopes of the mountains, upon which many villas and hotels have been constructed, are adorned with orange, lemon, carob and other trees.

Almost continuous with Villefranche is Beaulieu, and beyond it the tabular promontory of Monaco juts out conspicuously. Upon this mass of rock

stands the old town, the palace of the Prince of Monaco, and the conspicuously placed Museum of Marine Biology, which the late prince constructed. From the picturesque ramparts of the old town of Monaco one looks down on the small turquoise bay of Monte Carlo, with the world-famed Casino, placed upon the shelf of rock which forms the eastern limb of the principality. Upon this is crowded a compact group of hotels, shops, restaurants and apartment houses.

Between Monaco and Monte Carlo is the still more closely built quarter known as Condamine, while, above, the mountains rear themselves almost vertically and culminate in the conspicuous "Tête du Chien," and less prominent heights. From Monte Carlo a funicular railway ascends the cliffs to La Turbie, where a village surrounds a conspicuous Roman monument, erected by the Emperor Augustus.

Menton is the most easterly town on the French Riviera, which was ceded to France in 1860 together with the



BEAUTY OF COASTAL SCENERY ON THE ITALIAN RIVIERA

The little Italian town of Bordighera, with its picturesque coast-line and magnificent olive and palm groves, lies on the Mediterranean in the province of Porto Maurizio, six miles by railway west of San Remo. Engaged actively in floriculture, its flowers—especially roses, pinks and anemones—have won repute throughout Europe, and many northern towns draw hence their winter supplies



SUNSHINE AND FLOWERS AT SAN REMO, A FAVOURED ITALIAN TOWN ON THE LIGURIAN SHORE

Like many other coastal towns on the Riviera di Ponente, San Remo is famous for its genial climate. Sheltered by a mountain background it lies in the province of Porto Maurizio, 26 miles east-north-east of Nice, embowered in olive groves spread about the valleys and the adjoining foothills; its secluded situation making it a pleasant place of sojourn for many invalids. From the top of a steep hill, occupied by the older parts of the town, the white houses stretch away to the coast of the Ligurian Sea, where are found the more modern quarters with their beautiful promenades and gardens, fine villas and shops.

E. N. A.

adjoining strip of country. In some ways this town can claim to occupy the most beautiful spot on the French Riviera. The old town, attractively perched upon a promontory, divides Mentone proper from the Bay of Garavan.

On account of the mildness of its climate and the fact that the mistral is scarcely felt, Mentone has for many years been recommended by doctors for the consumptive, and for this reason every winter finds the place invaded by a very large number of invalids of the type who can afford to travel far in search of ideal conditions.

Bordighera and San Remo are close together at the western end of the Italian Riviera. Both of them have their picturesque old towns, and in each case large and admirably built modern hotels are placed above the sea-level in well wooded gardens having beautiful views along the coast.

Farther east, Alassio is one of those places which have not yet grown so much as to destroy the original charm associated with the little seventeenth century Ligurian town. Savona has a busy and well-protected harbour and is essentially an Italian town, unspoilt and independent of any annual flood of winter visitors.

The great seaport of Genoa has now a population of over 300,000 and, as already mentioned, has adjoining it the ship-building town of Sestri Ponente, a place whose plain and almost ugly characteristics are inclined to shock one after a sojourn in the beautiful resorts east and west. But the city of Genoa, whose ancient nucleus stands close down by the harbour within its solidly

constructed defensive walls, still retains to a very great extent its old-time characteristics.

Most of the streets are exceedingly narrow and the houses are so tall that only a small strip of sky is visible by craning the head upwards as one walks along the thoroughfares between the stone-built "blocks." In some cases the ways are so narrow that a man can easily stretch his hands from side to side, and in one case at least the same can be done with the elbows.

Except where there is an elaborate doorway or one of the old churches breaks the line of the buildings, there is a gloomy monotony in the streets of ancient Genoa, entirely different from the average towns of Northern Italy; where the sunshine penetrates easily and attractive arcaded footways are so usual a feature. Outside the medieval city spreads the Genoa of the Renaissance and later years with imposing palaces, new streets designed on modern lines and representing the grandiose ideas of modern Italian architecture.

Eastwards from Genoa there is strung out along the precipitous coast a long chain of charming old places full of quaint corners and possessing castles, churches and monasteries.

At the inner end of the great Bay of Spezia is the large modern town of that name, which suffers from the usual defects of industrialism, having developed a considerable naval dockyard and a certain amount of grime and monotony. The surroundings, however, are exceedingly beautiful, and the Bay of Lerici, where Shelley had his villa, and many other little towns along the coast, are full of colour and charm.

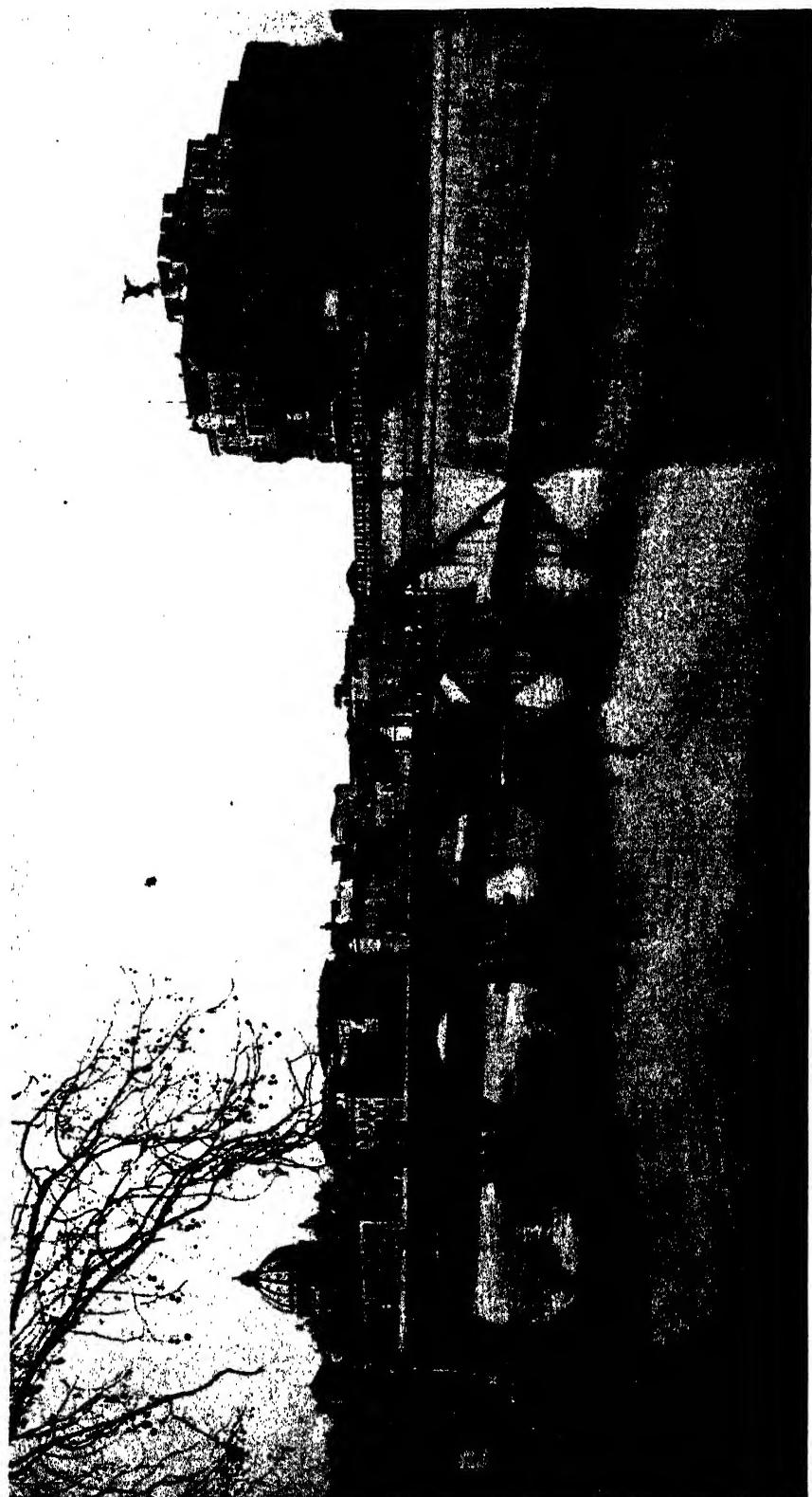
RIVIERA: GEOGRAPHICAL SUMMARY

Natural Division. The standard example of a characteristic region where steep mountain slopes face both sun and sea. (Cf. the Crimea, Portugal near Lisbon, Western Georgia.) Physically a border zone between the edge of the old land submerged under the Western Mediterranean, and the Alps-Apennines chain of uplifted mountains.

Climate and Vegetation. Mediterranean type, modified as to temperature by the southerly aspect and protection from the mistral. Winter rains. Forest. Maquis.

Products. Flowers, fish, olive oil; ships.

Outlook. The future rests with the development of tourist traffic and the maintenance of the district as one of the world's playgrounds and sanatoria.



E. S. A.

CASTLE OF SANT' ANGELO, ORIGINALLY THE MAUSOLEUM OF HADRIAN, ON THE 'RIGHT BANK OF THE TIBER'

Two distinct quarters, the Borgo on the north and Trastevere on the south, constitute the city of Rome on the right bank of the Tiber. The Borgo is the quarter of the Vatican and also contains the massive tomb which Hadrian, in A.D. 136, built for himself near the river bank. Later this tomb, which is composed of an immense cylindrical structure, 80 yards in diameter, rising on a substructure 114 yards square, was converted into a fortress and became known as the Castel Sant' Angelo. The three central arches of the Ponte Sant' Angelo belong to the original bridge erected by Hadrian to connect his tomb with the city

ROME

The Eternal City as It is To-day

by Harold Stannard

Author of "Rome and Her Monuments"

AS a matter of tradition ancient Rome was founded on April 21, 753 B.C., and as a matter of fact modern Rome came into existence on September 20, 1870.

On that memorable day the troops of the king of Italy reached the goal of their march from Florence. After a few hours' fighting they broke through the city's ancient walls hard by the Porta Pia, where the memorial column now stands, and marched in along the wide street which, by an irony of history, a Medici pope had laid out in order to facilitate communication with his Florentine friends.

The first building within the walls to see the Italian tricolour borne in triumph was a villa built by a Roman prince who owed his title to papal favour. To that building, more even than to the rest of Rome, the day brought a change of destiny, for it is now the British Embassy.

As though mindful of its past, Rome at once re-enacted the story of Romulus and Remus. Romulus was played by King Victor Emmanuel, sovereign of the troops whose entrance had made Rome the capital of Italy. Remus was Pope Pius IX., the last Roman Pontiff to rule as a temporal prince.

Humiliation of Papal Power

For the previous ten years his authority in Rome had rested on the support of the French emperor and the presence of French troops. But Sedan put an end to that political combination; the handful of Swiss Guards were powerless to check a force which was the vanguard of a national army; and the pope found himself stripped of the power which he and his predecessors

had wielded in Rome for at least a thousand years.

Even on this day of humiliation, however, the pope refused to leave the city which still felt itself the centre of Christendom. He retired to his Vatican Palace adjoining the vast cathedral built over the traditional site of the Apostle's grave. There he remained, a prisoner despoiled of his state, and only quitted the Vatican palace as a corpse.

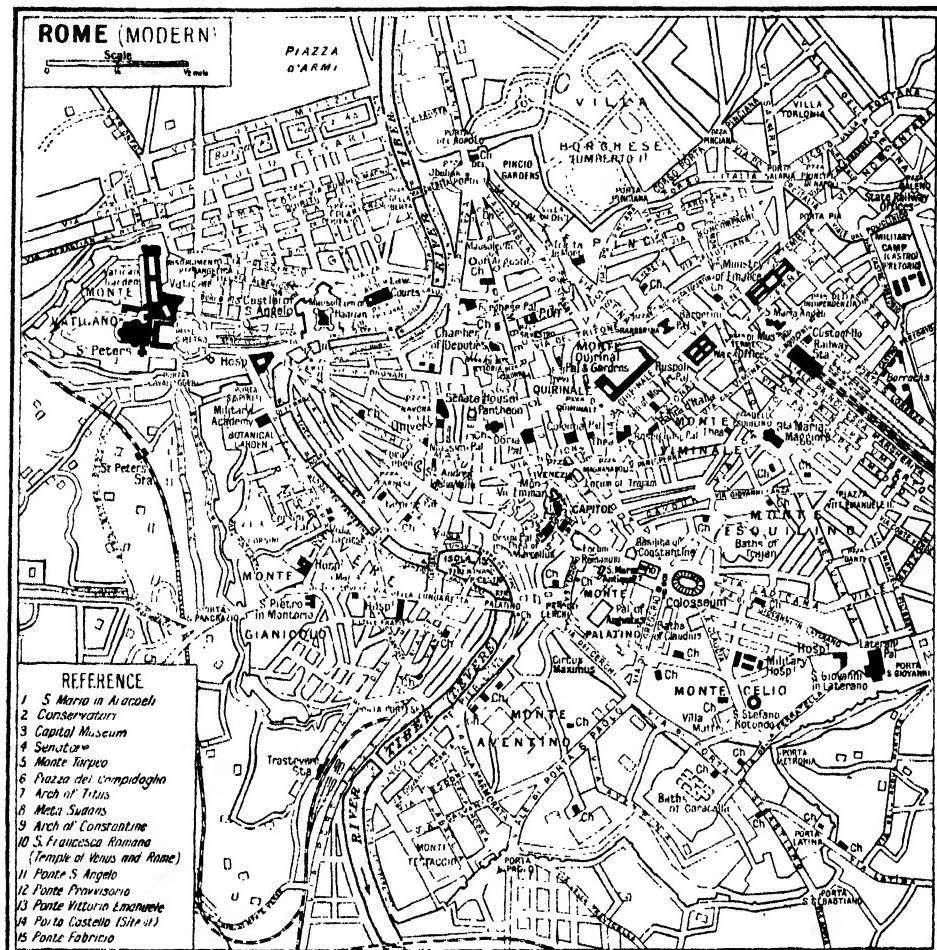
City Divided within Itself

The precedent which he set has been maintained; his successors have lived and died in the Vatican and their bodies lie in S. Peter's; and until the day when Pius XI. showed himself on the balcony directly after his election, no pope had again been seen in public.

The event which established the kings of Italy in Italy's natural capital thus created a situation of great strain and complexity which has dominated Roman social life for over half a century.

The sovereign in the Quirinal and the sovereign in the Vatican confronted one another from the heights on either side the Tiber. The mass of the people were for the king; the nobles were for the pope; and the court which the king brought with him was recruited from all parts of Italy except Rome itself.

The outside world, neutral in the quarrel, was driven to maintain two sets of legations, one accredited to the pope and the other to the king, with the result that there gradually developed in Rome two ways of life—the old administration of the church scattered in various buildings throughout the city but centring about the Vatican and S. Peter's, and the new administration of



ROME AND ITS SEVEN HILLS, THE SEAT OF TWO POWERS

the state, established according to its own convenience in the capital which it had taken over.

In the early days of modern Rome there was much talk of a plan of development, the famous "piano regolatore," whereby the inevitable expansion of the city was to be carried out on lines which should harmonise with its traditions.

But from the first the facts forbade expansion on any such lines and modern Rome was inevitably planned as a gesture of defiance. The city which the Italians found was a serene old place, its reddish-brown buildings embowered in greenery. Its principal roads skirted its neglected antiquities and served to link its principal churches.

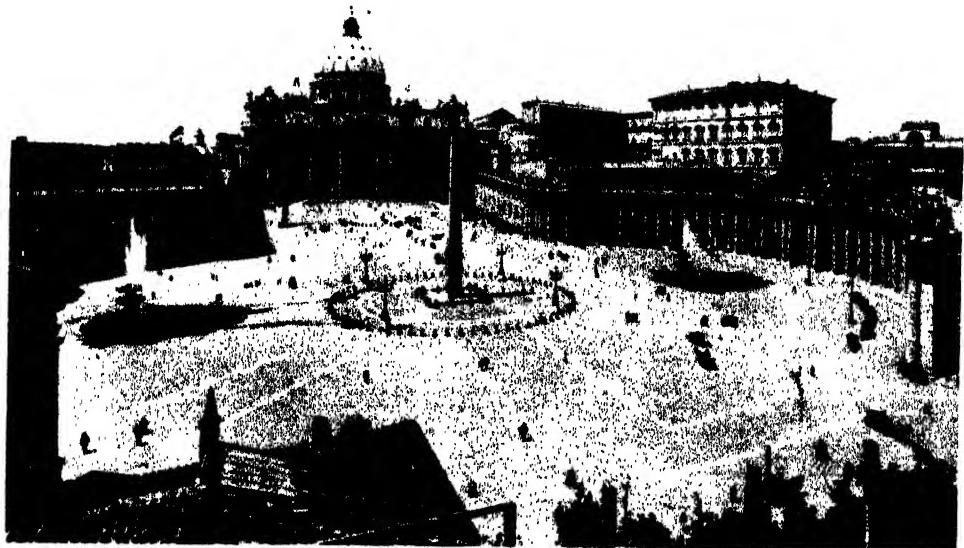
Its walls had grown far too big for its actual needs, and vineyards took up much of the space within them. In a word, all Rome was mellowly consecrated to the past.

Suddenly the strenuous bustling present swooped down upon it, absorbed it and proceeded to establish itself. The railway station became, appropriately enough, the centre of its activities. Opposite the station stood the solid remains of an ancient building, the Baths of Diocletian, one of whose halls had been converted by Michelangelo into a church. All around had been solitude.

This is the region which has been converted into the principal residential and business quarter of modern Rome.



ROME. S. Peter from the marble shaft of Trajan's Column surveys the Forum by which looms the dome of Santissimo Nome di Maria



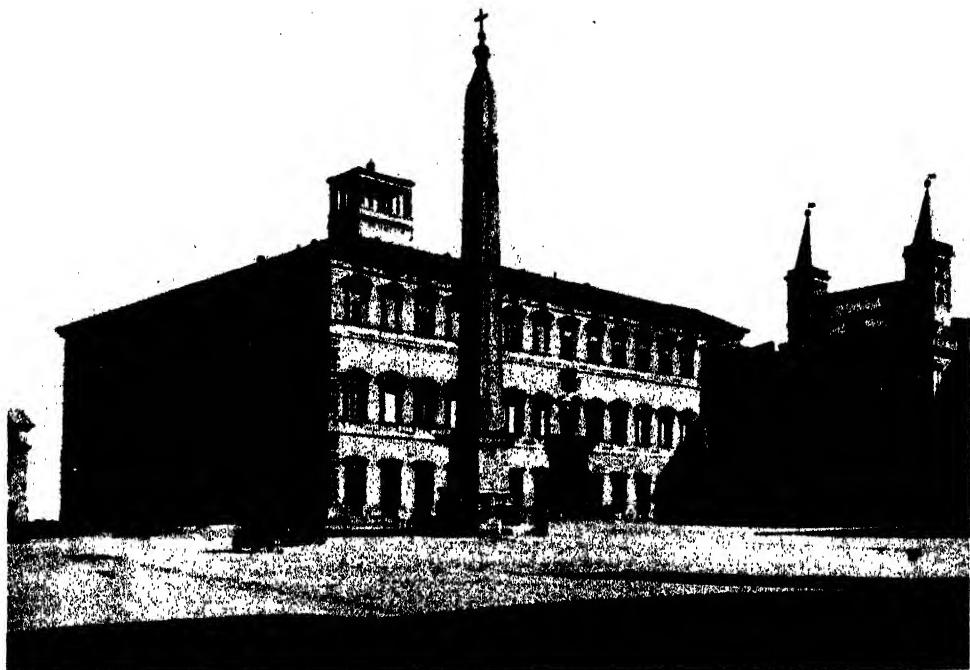
J. Beckett

Behind the obelisk in the splendid Piazza di San Pietro stands S. Peter's, the chief church of Roman Catholic Christendom



Donald McLellan

ROME. From S. Peter's dome above the colonnaded piazza the city stretches away towards the national monument glistering white

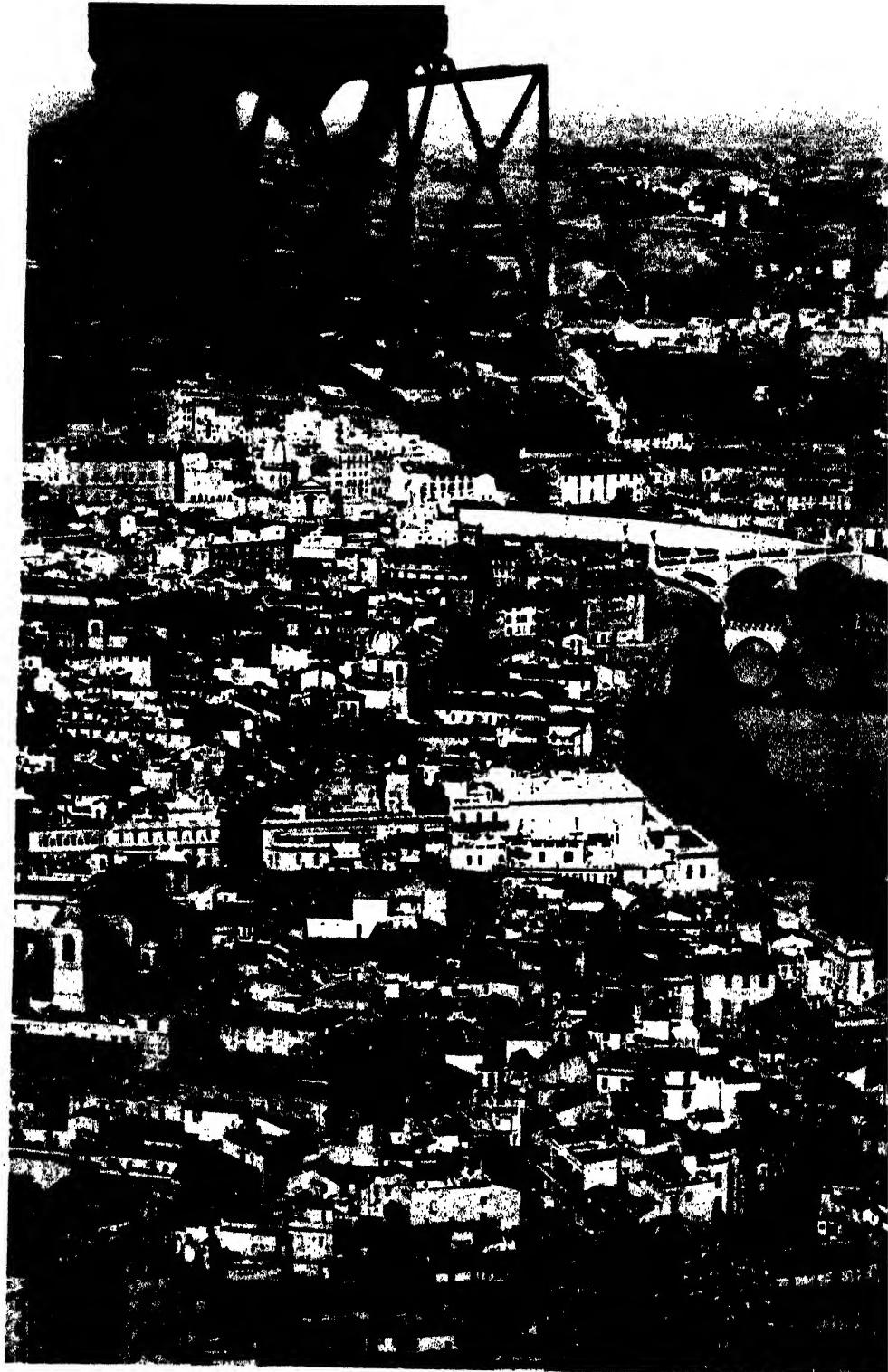


Before the Palazzo del Laterano, the residence of the popes ere they went to Avignon, is a red granite obelisk brought from Thebes

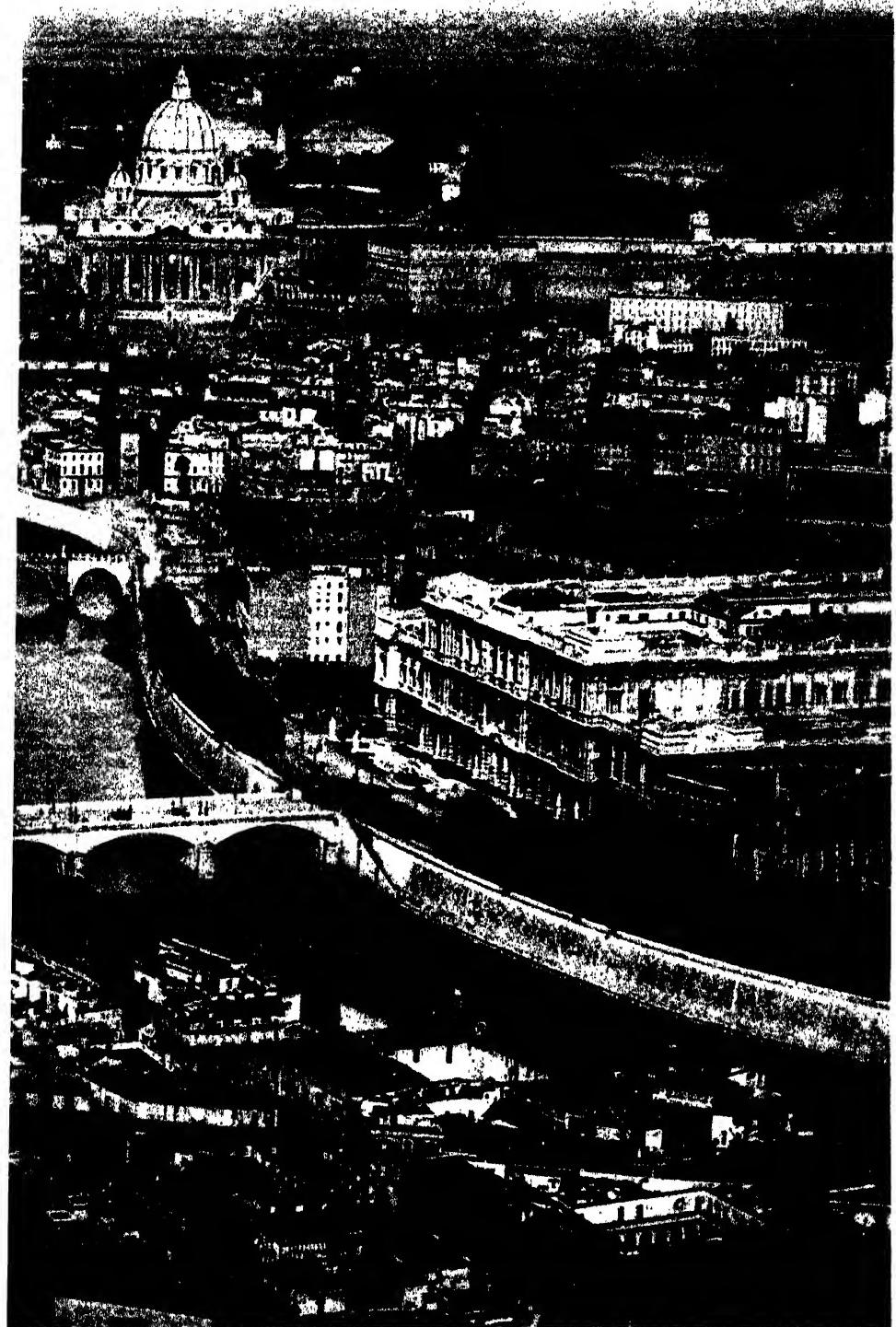


Donald McLeish

ROME. Departing travellers drink the water of the Fontana di Trevi and throw in a coin in the hope that they may revisit the city



ROME. Beneath the aeroplane lies the city through which the Tiber, between high embankments, meanders from the broad plains of Tuscany.

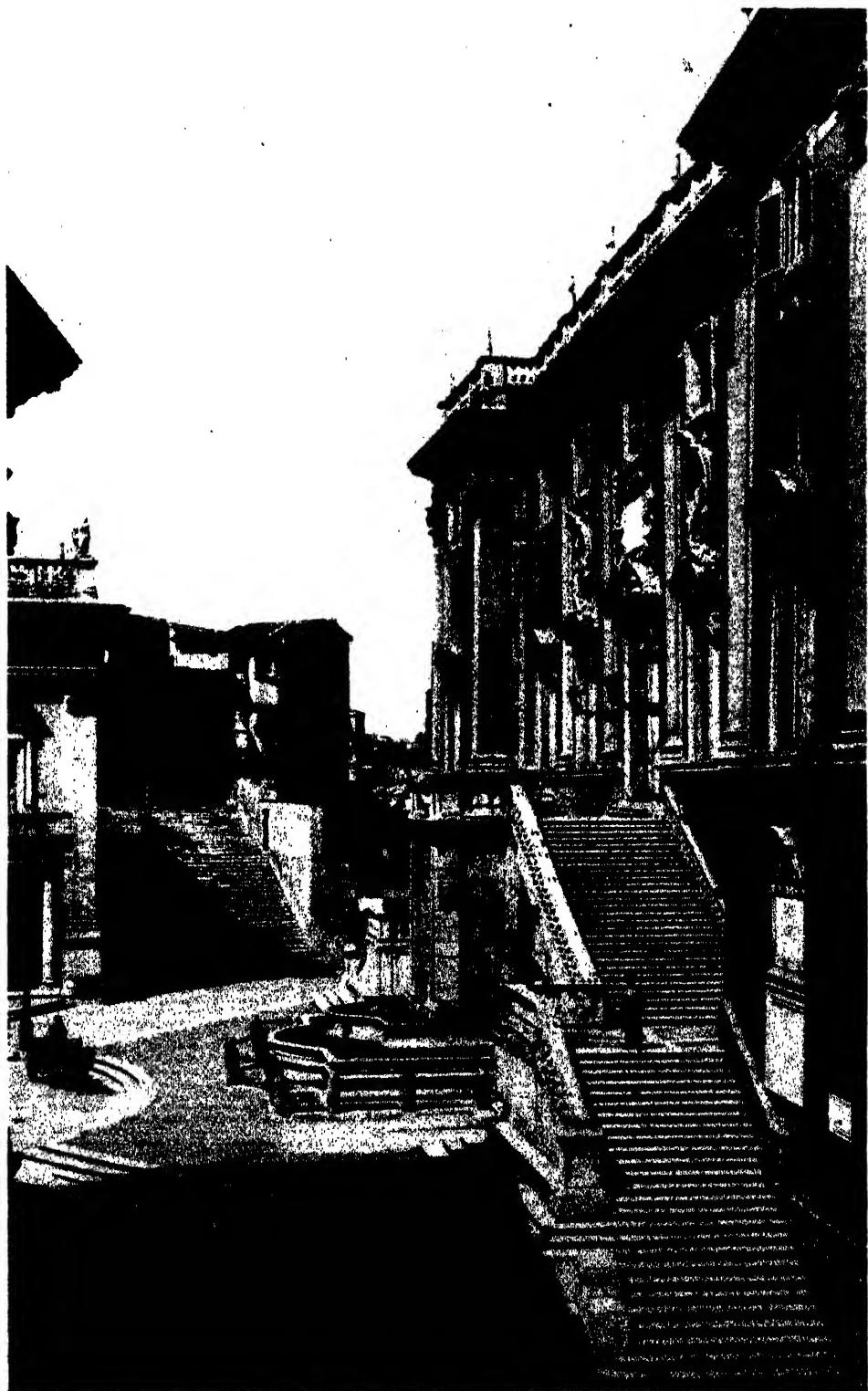


On the right are the new Courts of Justice and on the Monte Vaticano stands S. Peter's with the vast mass of the Vatican Palace at its right-hand side



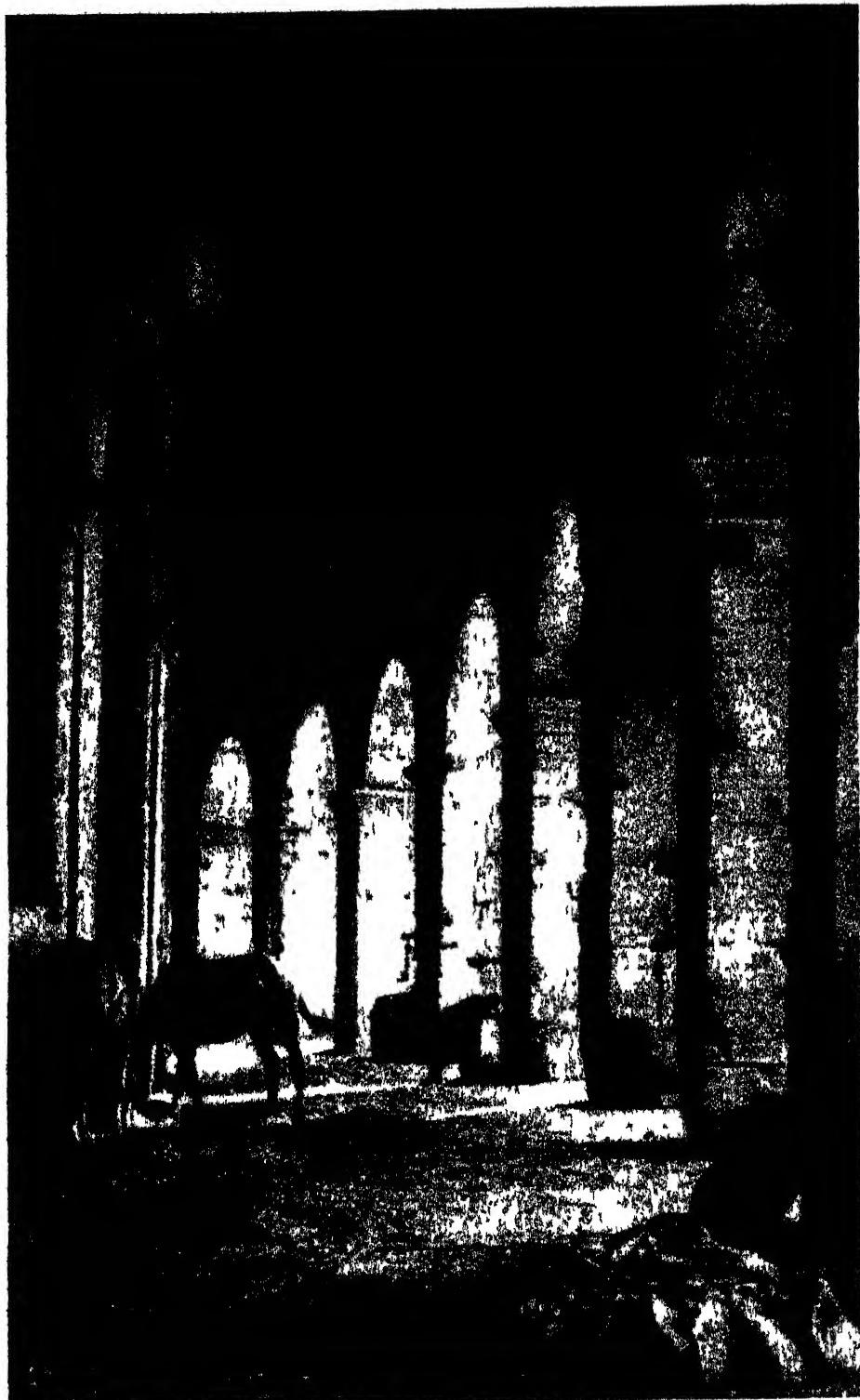
ROME. At the head of the Spanish Steps is the church of Santissima
Trinità de' Monti, first built by Charles VIII. of France in 1495

Donald McLeish



Mansell

ROME. Two flights of steps, designed by Michelangelo, lead up to the fine Palazzo del Senatore in the Piazza del Campidoglio



Herbert, Falter

ROME. Horses are now stabled in the outer corridor of the Colosseum where the early Christian martyrs were torn by wild beasts

The station remains; it would be no bad thing if it were replaced by a worthier structure; Michelangelo's church remains and has now become the most fashionable church in Rome, scene of royal weddings and the like. The Baths also remain and house one of the most splendid classical museums in Europe, including the collection of ancient pieces discovered in Latium since 1870. But the solitude is gone.

The space between the station and the church is graced by the most elegant of Rome's modern fountains, and from the other side of the fountain the Via Nazionale, the Oxford Street of modern Rome, runs to the heart of the city, and under other names is continued to the river. It crosses the Tiber by a modern bridge, a little below the bridge which the Emperor Hadrian built to give access to his tomb, now the Castle of Sant' Angelo; and should have been continued over ground occupied by the four narrow shabby streets of the Borgo until it debouched into the vast majestic piazza of S. Peter's.

The City's Shifting Centre

For that continuation, without which the main thoroughfare of modern Rome lacks end and aim, Rome has waited fifty years, and must still wait until the breach between pope and king is definitely healed. There could be no better example of the limitations which politics have imposed upon the "piano regolatore."

In its passage across the city the Via Nazionale winds its curving way down the Quirinal Hill and passes under the northern face of the Capitol. Here it meets the Corso, the main street of renaissance Rome, and the point of intersection, the Piazza Venezia, is modern Rome's heart. Ancient Rome's heart was the Forum, and the relation between the Forum and the Piazza Venezia gives the clue to Rome's growth throughout the ages.

Forum and piazza lie under opposite faces of the Capitol, the weather-beaten old rock round which the history of

Rome has ever swirled, and on whose summit the municipality of Rome is now installed with its art treasures in the exquisite buildings prepared and adapted for it by Michelangelo. The Forum was shut in on three sides by the Capitol, the Palatine and the Quirinal. The only way of expansion lay southward, and the region in which the Colosseum now stands was the most thickly populated quarter of the ancient city. It was this region which was thoroughly sacked by Normans only a few years after other Normans had conquered England.

The Rome of Cola di Rienzo

But not even the presence of the pope in his Lateran Palace availed to keep life in the southern quarters of Rome when Rome had become the recognized centre of Christendom. The pull was backwards towards the shrine of the Apostle across the river.

The spectator of the prospect from the balcony of Sant' Angelo can see for himself that the Romans of the Middle Ages clustered in the patch of land between the Capitol and the river and, if he chooses to ignore the modern Via Nazionale, he can make his way back to the city through what is left of the picturesque insanitary tangle of streets which constituted the Rome of Cola di Rienzo and even of the papacy's second founder, Gregory VII.

Michelangelo's Magic Touch

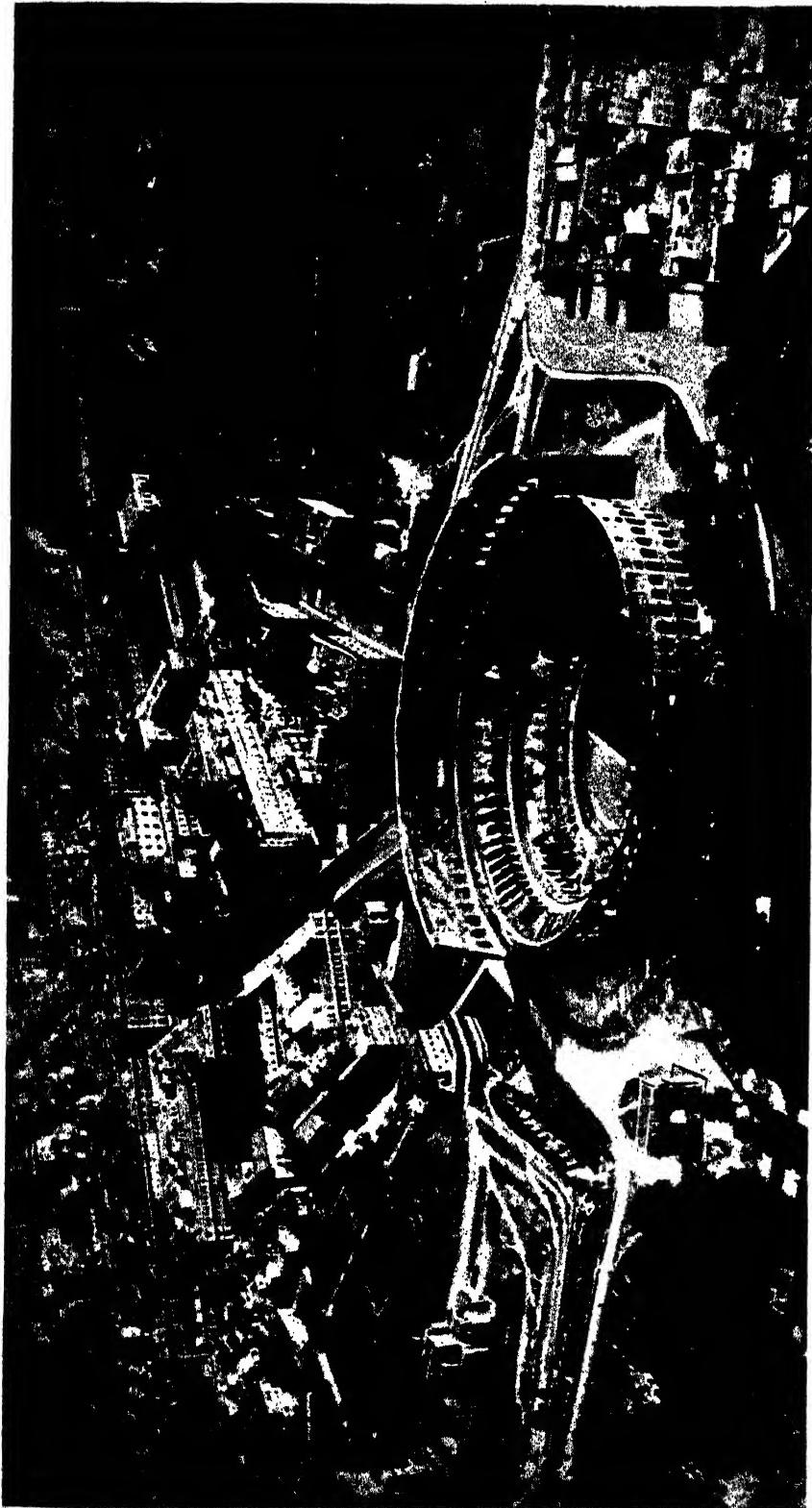
Returning homeward through this now neglected quarter he will come upon what is still the main approach to the Piazza di Campidoglio. Here is a most significant memorial of Rome's medieval past. With the shift of population westwards the Forum had been abandoned because it, too, lay the wrong side of the Capitoline rock. But the leaders of the Roman commune still clung to the rock itself, and it was their piazza which the Renaissance took over and gave to Michelangelo to beautify.

To him is due the flight of broad, low steps which lead to the piazza itself with



RELICS IN THEIR MODERN SETTING OF ANCIENT ROME, CAPITAL OF THE GREATEST STATE IN THE OLD WORLD

Rome, called the Eternal City even in antiquity, lies on both banks of the Tiber, some 17 miles from the Mediterranean. The ancient city lay on the left bank, on the far-famed Seven Hills, Capitoline, Aventine, Caelian, Esquiline, Viminal, and Quirinal, while modern Rome is mainly confined to the plain which lies on either bank of the river. The nucleus of Imperial Rome was the Palatine Hill, Mons Palatinus. It lies in the central foreground and directly behind it, stretching away to the Capitoline Hill on the left, are seen the magnificent ruins of the Forum Romanum, which formed the centre of the political life of the great city



OVERLOOKING THE ANCIENT ROMAN COLOSSEUM, ONE OF THE WORLD'S MOST IMPOSING STRUCTURES

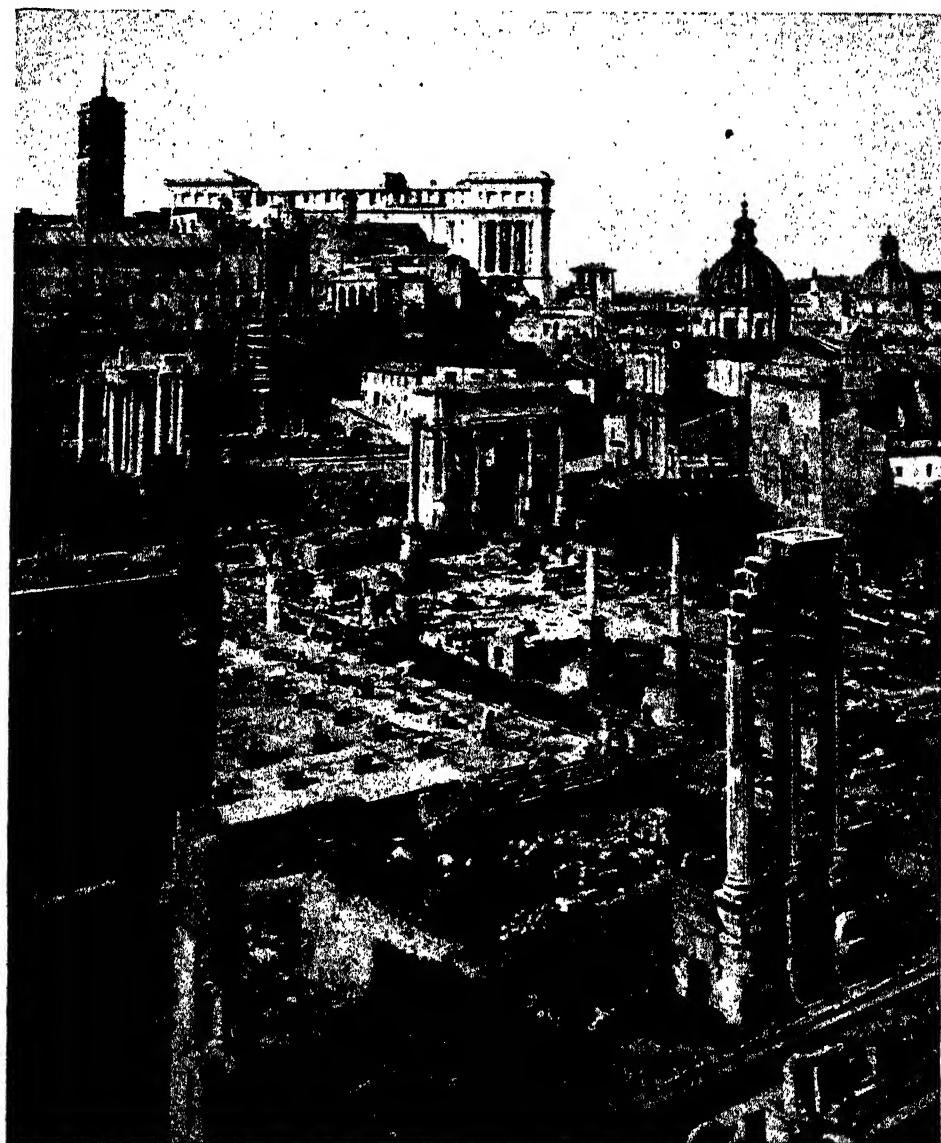
The Colosseum, originally known as the Amphitheatrum Flavianum, is the larger of Rome's two amphitheatres (the second being the Amphitheatre Castrense in the vicinity of the Lateran). This colossal structure, oval in shape and constructed almost entirely of large blocks of travertine, was erected by Vespasian and Titus in the first century A.D., and for nearly four centuries was the seat of gladiatorial displays and fights with wild beasts. Although the existing ruins are stupendous, it is estimated that two-thirds of the structure were removed in the Middle Ages to furnish building material for several important buildings in Rome.

a statue of a Roman emperor in the centre, the beautifully mellowed Palazzo del Senatore at the back, and the majestic, wonderfully proportioned palazzi on either side. Above towers the Aracoeli church where the city fathers once used to worship.

In the piazza is the mayor's parlour, and here, accordingly, Roman couples

come to be married civilly before proceeding to church. Particularly on a Sunday the little piazza is often packed with carriages and the steps of the palazzi are crowded with gay, talkative wedding groups.

There is, however, little traffic except wedding processions to be seen to-day along the Via Aracoeli which leads to



Donald McLeish

THE FORUM ROMANUM FROM THE PALATINE HILL

Rome, once the capital of the world, is rife with relics of antiquity. The ruins of the Forum Romanum are among the city's greatest treasures, for here are found the actual remains of many buildings immortalised in history. Above, on the right, are the three columns of the Temple of Castor and Pollux, in the centre is the Sacred Way and in the background the Arch of Severus.

the foot of the Capitoline steps. Renaissance Rome has pulled the centre of the city round to yet another face of the Capitoline rock; and here, as in all its doings, Renaissance Rome followed the way already marked out for it by the Imperial Rome from which it took its genius and inspiration.

The Roman emperors had to deal with a traffic congestion far more difficult than that which harasses modern London. Rome was the capital of the world, but her streets were so narrow that vehicles had to be prohibited from entering within the walls. What was worse, all roads led to the Forum, and the Forum itself was an open space never very large, and in course of time much encroached upon by public buildings, with steep hills on three sides. The easiest of these hills was the Quirinal, but the problem of getting people to the other side of it remains yet.

It can be handled by driving a tunnel through the hill, which is the method that has been adopted by modern Rome, or by cutting away the spur of the Quirinal which ran up to the Capitol, which is the method adopted by the Emperor Trajan 1800 years ago. The artificial level space thus created was made into the most magnificent of Rome's *fora*, and at last the population of the city could get out into the flat and open ground.

The ground into which Trajan's forum debouched is now the Piazza Venezia, and from the foot of the Capitol a road was driven due northwards until it touched the river more than a mile



Mansell

IN THE UNIVERSITY'S COLONNADED COURT

Here is seen part of the oblong court, with its two-tiered colonnade, of the Università della Sapienza which was founded in 1303 by Boniface VIII. The university church of S. Ivo, crowned by a fantastic spiral tower, dates from 1660

away. This road is the modern Corso, and Renaissance Rome grouped itself about its line. In the middle of the fifteenth century, Nicholas V., the first humanist pope, planned a new residential suburb to the north and repaired an old aqueduct.

The Trevi Fountain, the most delightfully fantastic combination of sculpture and water in all Europe, still commemorates his work. This is the fountain into which visitors to Rome throw their halfpence before they leave in order that one day they may visit Rome again.

It lies just off the Corso, which for close on five centuries has been the centre of Rome's social life. Certain imperial monuments once adorned



Donald McLeish

THE CORSO, ROME'S FASHIONABLE AND HISTORIC THOROUGHFARE

The Corso of Rome, deriving its name from the carnival horse-races, is officially known as the Corso Umberto Primo, and follows the route of the old Via Flaminia, running in a straight line from the Piazza del Popolo to the Piazza Venezia, a distance of nearly a mile. It contains many celebrated buildings and numerous fine façades of the seventeenth and eighteenth centuries.

the Corso. Near the Capitol for instance was the central polling station built by Julius Caesar, adjoining which is the traditional site of the room in which S. Paul taught in Rome. At the farther end, not far from where the street now issues into the great piazza under the Pincio which was laid out by the Napoleonic governor of Rome, Augustus built his immense circular tomb. The monument was once a bull-ring, and is now Rome's principal concert hall.

Halfway along its length the street was spanned by a triumphal arch built about A.D. 50 by the Emperor Claudius to commemorate his conquest of one of Rome's minor provinces—a remote but fertile island named Britannia. The arch stood until the seventeenth century when the paramount interests of sport compelled its demolition.

Among the attractions of the Roman carnival was a race of riderless horses down the Corso to the Capitol. The arch



Donald McLeish

S. PETER'S SEEN FROM A CORNER OF THE VICTOR EMMANUEL BRIDGE

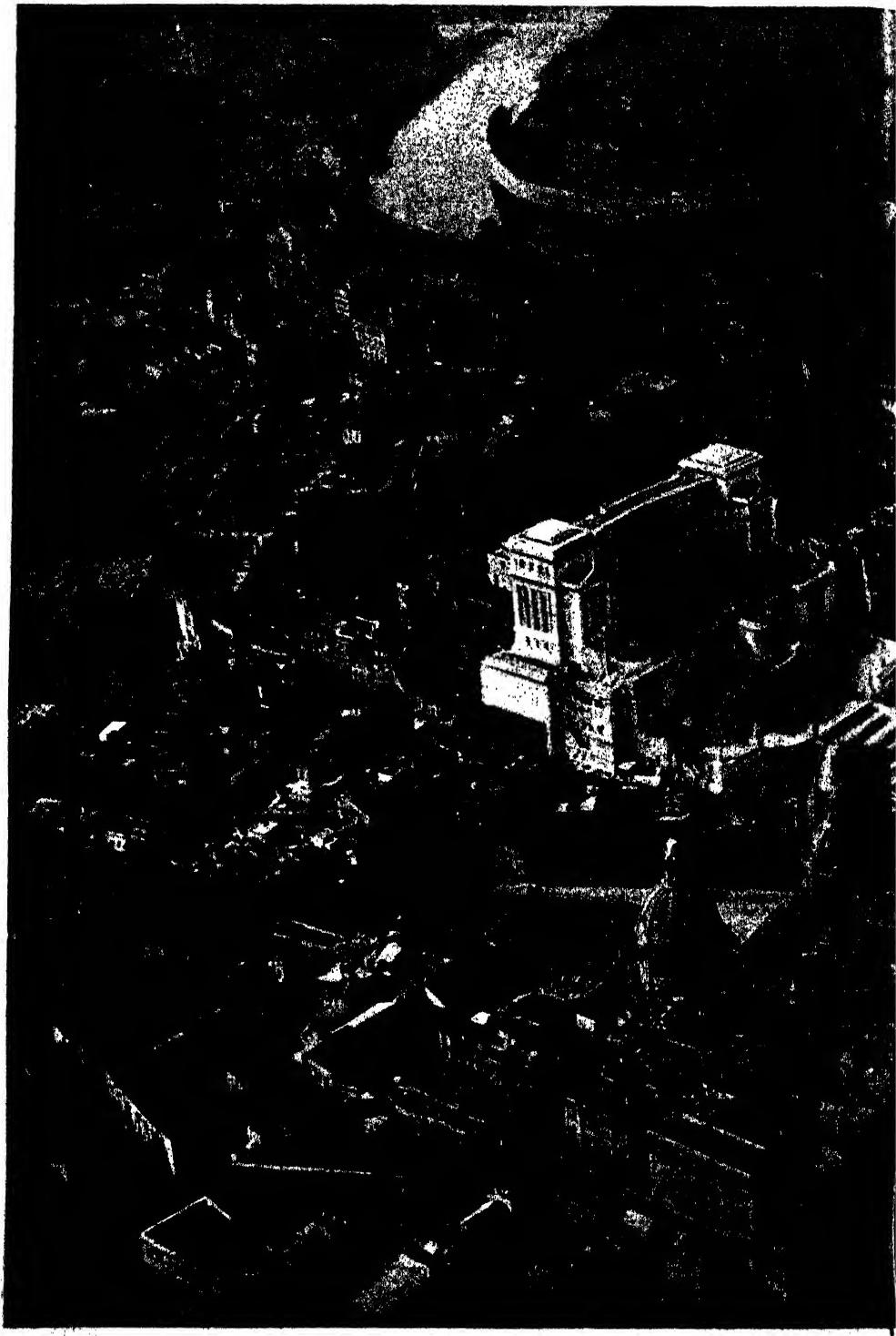
The Tiber takes its distant source in the Tuscan Apennines and, after a course of about 219 miles, reaches Rome, falling into the sea 17 miles farther south. It intersects the city from north to south and is crossed by twelve bridges. The Ponte Vittorio Emanuele, here seen from the left bank, was begun in 1908 and continues the straight line of the Corso of the same name.

interfered with a straight run, and horses were known to charge into it; so a pope with a proper sense of what was due to the people's amusements put things right by pulling the arch down.

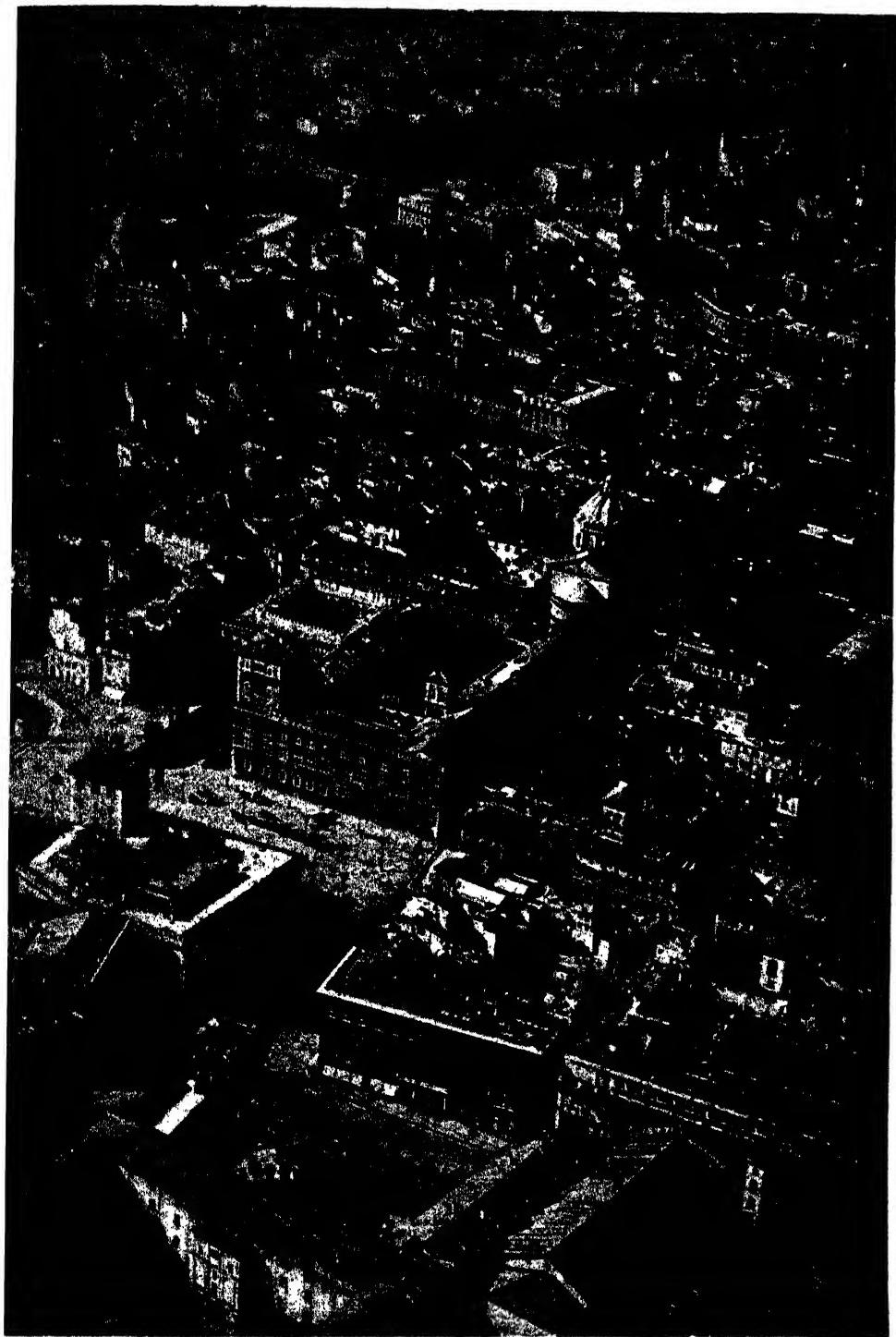
To this day, as for the past 400 years, the Corso is the largest and most animated thoroughfare in Rome. Its narrowness is indeed a drawback; trams are impossible, and the way of the new motor-buses is exceedingly difficult. But in the noisy, good-tempered

Roman fashion, the traffic gets along, and though pedestrians flow over from the narrow foot-walks into the roadway, providence watches over them. When it has run about a quarter of its course, the Corso opens out into a piazza embellished with a column commemorating the wars of Marcus Aurelius, and here the Italian state has chosen to establish its seat.

In ancient days the site was used for the funeral pyres of emperors and the

**AERIAL VIEW OF ROME, CHIEF CITY OF THE KINGDOM OF ITALY-**

This view looks west towards one of the beautiful curves of the Tiber. The immense white structure in the centre is the monument of Victor Emmanuel II, which, over 200 feet in height, lies on the north slope of the Capitoline Hill facing the Piazza Venezia. Magnificent colonnades lavishly adorned with mosaics and paintings, the columns being 50 feet high, rise behind the statue of the king on horseback.



—AND ITS STORIED HUDDLE OF CHURCHES, PALACES AND MONUMENTS

Buildings of all periods invest the city with unparalleled interest and fascination. In the immediate foreground is the Palazzo Colonna, begun about 1417 and enlarged and altered in the seventeenth and eighteenth centuries. Bordering the Piazza Venezia is the palazzo of the same name begun in 1455, mainly constructed with stones taken from the Colosseum. In the distance is the island in the Tiber

accumulated ashes have made a little mound. On this mound was built a great renaissance house which in later papal times was used as a law court, and has been converted by the Italians into their Chamber of Deputies. The building has been enlarged to meet its present needs, and has been adorned on its northern side with an entirely new façade of white travertine and pink brick known to the profane as the Strawberry Ice.

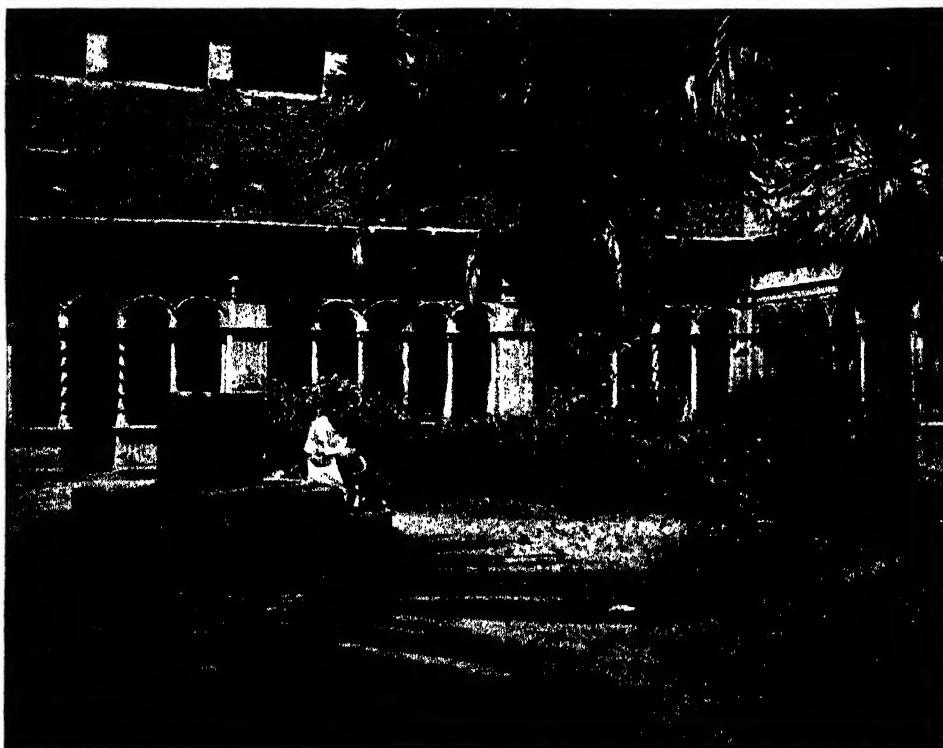
Opposite is the café which seems to constitute the real centre of the city's political life. Always crowded and always a little turbulent, it offers unique opportunity for the study of Roman life and manners.

But it is not only on the Corso itself that modern Italy has set her mark. The side of the Capitoline rock from which the street starts is now entirely covered by the most ambitious monu-

ment erected in modern times. It is a gigantic statue of Victor Emmanuel, the first of his line to rule in Rome, placed in a yet more gigantic architectural setting.

Criticism has attacked it, perhaps unfairly, for the taste of Rome has always been towards the grandiose, and the modern world has no work on an equal scale with which to compare it. There is, however, little doubt that the design was influenced to its detriment by political considerations.

The monument was planned, above anything else in modern Rome, as a gesture of defiance to the prisoner in the Vatican, and thought was given to its appearance from his windows. On this account the equestrian figure of the king was made to stand out so prominently that it appears to be divorced from its setting, and on this account the portico which surmounts



H. A. Fawcett

IN THE QUIET CLOISTERS OF SAN GIOVANNI IN LATERANO

The secluded cloisters of the celebrated basilica, San Giovanni in Laterano, are rich in beautiful Romanesque architecture of the thirteenth century, ornamented with numerous slender inlaid and spiral columns. In the corridors various objects connected with the history of the basilica are preserved, while in the centre of the palm-shaded court stands a delightful old ninth century well

the work was deliberately heavy by way of challenge to the colonnade round S. Peter's piazza. Under one of the monument's central slabs has been laid the body of Italy's unknown warrior. By this ceremony the significance of the memorial has been most happily transformed.

The problem of restoring to Rome that century-fusing unity which she has somewhat lost since 1870 has engaged the attention of the Nationalist government. A few significant steps have been taken. The Aventine Hill long remained in the desolation which overtook it in the Middle Ages. Bare save for the stately line of churches that mark its ridge, the bulk of its slopes is occupied by the one considerable vineyard left within the city's walls.

At long last the present has begun to lay its disturbing finger on the peace of the Aventine. The population has grown enormously since 1870 and modern Rome, like its inhabitants, is Italian rather than Roman. Because it has recruited itself from all quarters of the peninsula, its local life is neither vigorous nor individual, and as a modern urban centre it cannot rival either Milan or Naples.

Such must needs be the fate of a city which cannot absorb its own past and dare not overwhelm it, and the Rome of to-morrow will enjoy a fuller, freer growth as it establishes itself outside the historic circuit of the ancient walls. But no such expansion is possible until the difficulty of communications has been somehow overcome. With few exceptions, Rome's streets are old and therefore narrow, and its tramway system,



C. H. E. West

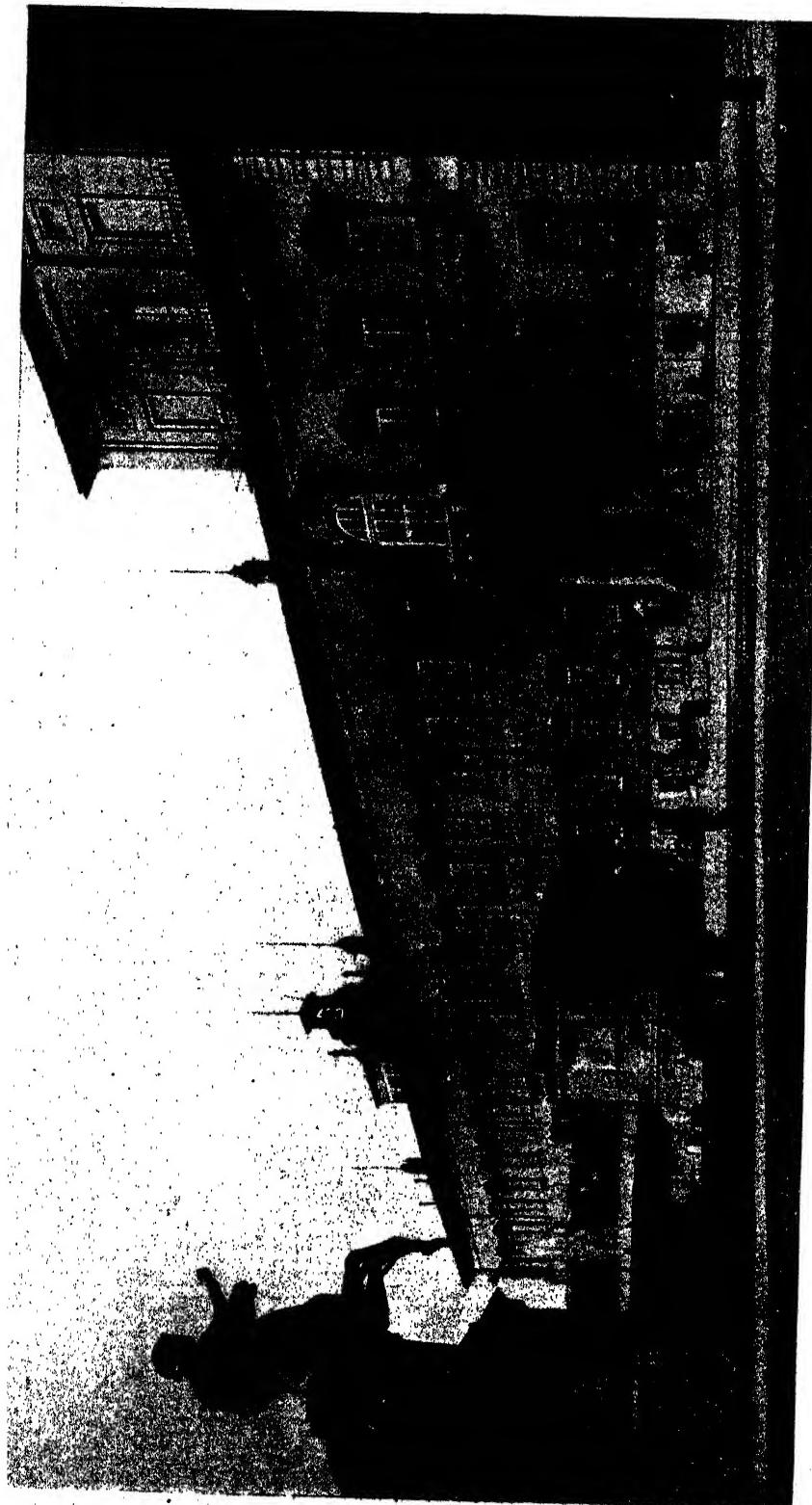
CHURCH OF SANTA MARIA MAGGIORE

Rome has no fewer than eighty churches dedicated to the Virgin, the largest—as its name indicates—being S. Maria Maggiore, founded in A.D. 352. Before the principal façade rises a high column crowned with a bronze figure of the Virgin

which is reasonably efficient in the new northern and western suburbs, in the central area supplies matter for local caricaturists.

A tube seems essential, but the construction of a tube presents exceptional difficulties in a city which is not only notoriously hilly but is built on some twenty feet of its own ruins. The Fascisti may be trusted to have a plan—it is one of their merits that they tackle all problems in a temper of exuberant confidence—but it has not yet been produced.

For the time being Fascism has been more concerned to impress itself on the historic ruins, once the heart of the world, which crown the Palatine, and fill the valley between the Capitoline and the Caelian. Time and earthquake,



Ewing Galloway

THE PALAZZO DEL QUIRINALE, ROME'S ROYAL RESIDENCE, FACING THE PIAZZA OF THE SAME NAME

Founded by Gregory III. in 1574 this palace, since 1870 the residence of the King of Italy, is situated on the Quirinal (Collis Quirinalis), 170 feet in height, one of the seven hills on which Rome is built. Its chief facade is in the Piazza del Quirinale, which is beautified by a fountain with an ancient granite basin, an obelisk and two immense marble groups of horse-tamers, the last-named dating back to the Imperial Age. So numerous were the statues which adorned the streets of ancient Rome that the city was said to have two equal populations, one in flesh and blood, the other in bronze and stone.

MANSELL

MAJESTIC DOME OF S. PETER'S SEEN FROM THE SUN-LIT, FLOWER-SCENTED GARDENS OF THE VATICAN

The Vatican, the official residence of the pope, consists of a large irregular group of buildings lying on the low hill which was known to ancient Rome as the Mons Vaticanus. The group includes palaces, chapels, offices, courts and gardens and covers an area of more than 13 acres, and these, together with S. Peter's and other buildings, are under the direct sovereignty of the pope. The Vatican gardens, from which beautiful views of the dome of S. Peter's are obtained, lie along the declivity of the hill ; they are very extensive and magnificently laid out with flower-beds, artificial pools, natural wood and high box hedges bordering the long alleys





OBELISK WITH WATER-SPOUTING LIONS IN THE PIAZZA DEL POPOLO

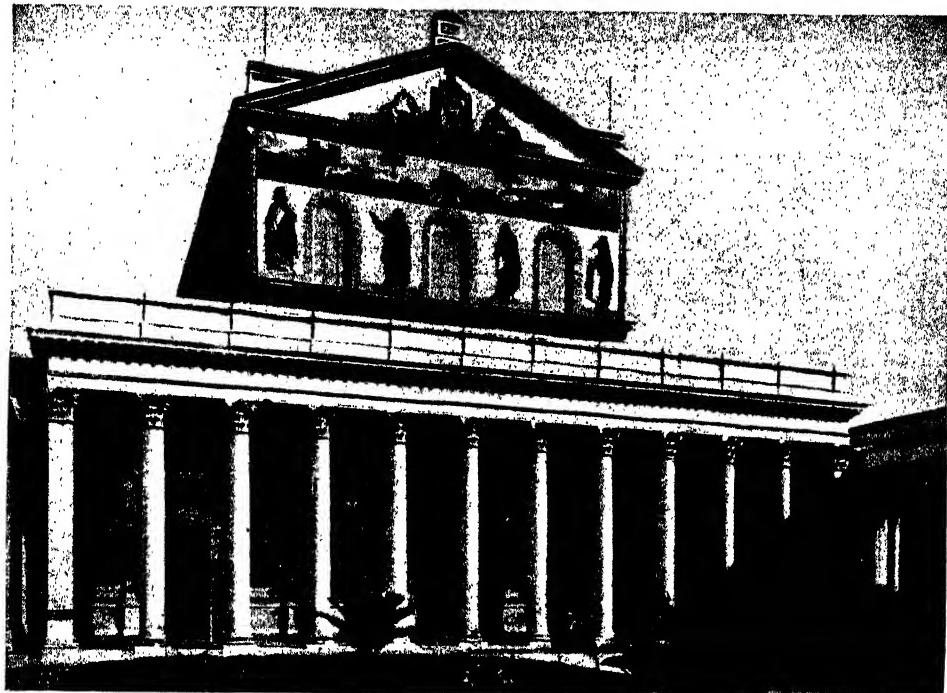
A very impressive entrance into Rome on the north is formed by the Piazza del Popolo, from which three streets radiate towards the south; that in the centre, between the twin churches of S. Maria di Monte Santo and S. Maria dei Miracoli, being the Corso, Rome's principal thoroughfare. The red granite obelisk, erected here in 1589, once stood before the Temple of the Sun at Heliopolis

foreign conquerors and Renaissance builders, have dealt hardly with them, yet, even so, the whole world contains nothing more sublime than their tranquil majesty in decay.

The broken columns of the Forum, the roofless chambers of the Palatine, the tremendous façade of the Colosseum, are modern Rome's reminder of the days when ancient Rome held the government of civilization. Too long has modern Rome turned her back on them and left them for tourists to gape at, and it was more than a dramatic instinct which prompted Mussolini to review his "black shirts" under the

shadow of the Colosseum, and to lay a laurel wreath in the recess on the edge of the Forum which once contained the altar of Julius Caesar.

Through such gestures as these the temper of the city is changing under our eyes, and a livelier consciousness of Rome's incomparable past is beginning to enter the hearts of her present inhabitants. On Sundays, when admission to the Forum and the Palatine is free, these historic sites are crowded with Romans of the humbler class, all eager to have the meaning of the monuments explained to them, and ready listeners to the patriotic young men who



E. N. A.

MODERN MOSAICS AND MONOLITHIC COLUMNS OF A FAMOUS BASILICA

Within the walls of San Paolo fuori le Mura, founded in 386, Christian worship was celebrated without a break for nearly 1,500 years, and before the great fire of 1823 which destroyed practically the whole building this church was the only specimen existing in Rome of a basilica on the original lines. Now restored, according to its ancient design, its aspect is as impressive as of old



Mansell

PALAZZO FARNESE, ONE OF ROME'S ARCHITECTURAL TREASURES

The architecture of the Palazzo Farnese is considered some of the finest in Rome. This beautiful palace begun in 1514 by Pope Paul III., while still cardinal, was continued after his death under the superintendence of Michelangelo, who is responsible for all the upper storey with its handsome cornice. The chief building material was taken from the Colosseum and the Theatre of Marcellus

give free lectures less concerned as a rule, it is true, with the hard facts of archaeology than with their application to the circumstances and problems of the present day.

Rome as the Popes Planned it

Not even Mussolini attempted a parallel effort to associate modern Rome with the Rome of the popes. In truth there is less need for it. Despite the Victor Emmanuel monument and the Via Nazionale, the appearance and the lay out of Rome are still papal. A pope planned the main avenue from the Quirinal eastwards which bisects the modern residential district, and is lined with modern official buildings. Another pope, Sixtus V., who sent the Spanish Armada against English shores, planned the switchback road at right angles to it which connects the Pincio with S. Maria Maggiore.

S. Peter's dome broods over the whole city, the Aracoeli looks down on the Capitoline piazza, the main road to the Alban hills runs past the Lateran, the main road to the Sabine mountains past S. Lorenzo, the main road to the sea past S. Paolo. Go where he will, the Roman cannot escape his churches, and would not if he could. In them is enshrined the history of that second Rome which held its unique place in the thought of Christian Europe from the triumph of Christianity to the Reformation, and which, stripped of her power and despoiled by foreign invaders, yet ruled the world and gave it its law, its learning and its faith.

When the Roads have Led to Rome

To this day the churches of Rome most fitly possess almost all the city's more delectable sites, and the life of modern Romans roars around their walls. In a sense too subtle for any change in temporal power to affect, the prisoner of the Vatican still yields lordship over Rome.

Perhaps, too, it is because of the papal palace and the papal cathedral

across the Tiber that, capital of a national state though she has become, Rome is still the most cosmopolitan city in the world. Thither resort scholars and artists and visitors from every quarter of the globe, attracted by one or other of Rome's multitudinous aspects, and the marked divisions in local society as well as the existence of a double series of foreign missions assure an unusual number of centres of social life.

All roads lead to Rome, says the proverb; it might have added that they diverge very curiously within her walls so that all tastes are represented in her life just as all periods are represented in her monuments. Yet ultimately Rome is still one, holding together elements apparently incompatible by the power of her compelling unity, and this special quality is made visible in the most celebrated of all the views from her heights.

What Garibaldi Sees

It is the view from the Janiculum, the mile-long ridge which forms the rampart of the Tiber's right bank. A promenade runs along its summit, and from its central space the statue of Garibaldi looks down upon the city now won for Italy. It is the most splendid, most awe-inspiring urban panorama in the world.

Below lies all Rome from the French Academy gleaming white on the Pincio to the basilica of S. Paolo gleaming white on the road to Ostia. The historic hills stretch out their spurs towards the river, and upon them and beneath them Rome spreads out her glories, tower and dome, church and palace, of all the ages from the Colosseum to the Victor Emmanuel monument.

These are her landmarks, and about them surge the buildings of the modern city, not yet altogether at one with them, but aware of her present dignity, and rising through a growing pride in her past to a conviction that the future will proclaim her still eternal.

RUMANIA

A Varied Land of Natural Riches

by Philip Bateman

Author, Traveller and Journalist

RUMANIA, like its neighbours Serbia and Czechoslovakia, is not a geographical unit, but rather the concrete expression of a political and national formula.

The Great Rumania—România Mare—of to-day is the country of the reunited Rumanian people, a collection under one king of small states, inhabited by the descendants of the ancient Dacians and their Roman conquerors, an oasis of Latins in a desert of Slavs and Magyars.

During many centuries of oppression, the Rumanians spread themselves over a large area, forming self-contained colonies in other lands, beyond the borders of the original principalities of Wallachia and Moldavia. It was not until the end of the Great War, in which Rumania was, to all intents and purposes, defeated after a desperate struggle against overwhelming odds, that these colonies were reunited to the mother country, forming the kingdom of Great Rumania, with a population of about 17,500,000.

This new Rumania is a land of many frontiers; on the north are Czechoslovakia, Poland and Russia; on the east the Black Sea; on the south Bulgaria; and on the west Serbia and Hungary. Of all these frontiers, only three are natural; the river Dniester, dividing Bessarabia from the Ukraine, the Black Sea and the Danube, the Bulgarian frontier.

Costly Necessity for Defence

It can well be understood that the close proximity of so many enemy states, such as Bulgaria, Hungary and Soviet Russia, necessitates the maintenance of an important army, costing the country vast sums that would otherwise

be spent on industrial and commercial development.

A country of such importance—its area is 122,282 square miles as against 53,439 before the Great War—naturally possesses a vast variety of physical features. It is difficult to speak of a typical Rumanian landscape, for the term could include anything from a desert or a rolling plain of wheat to a scene of wild mountains and deep pine forests.

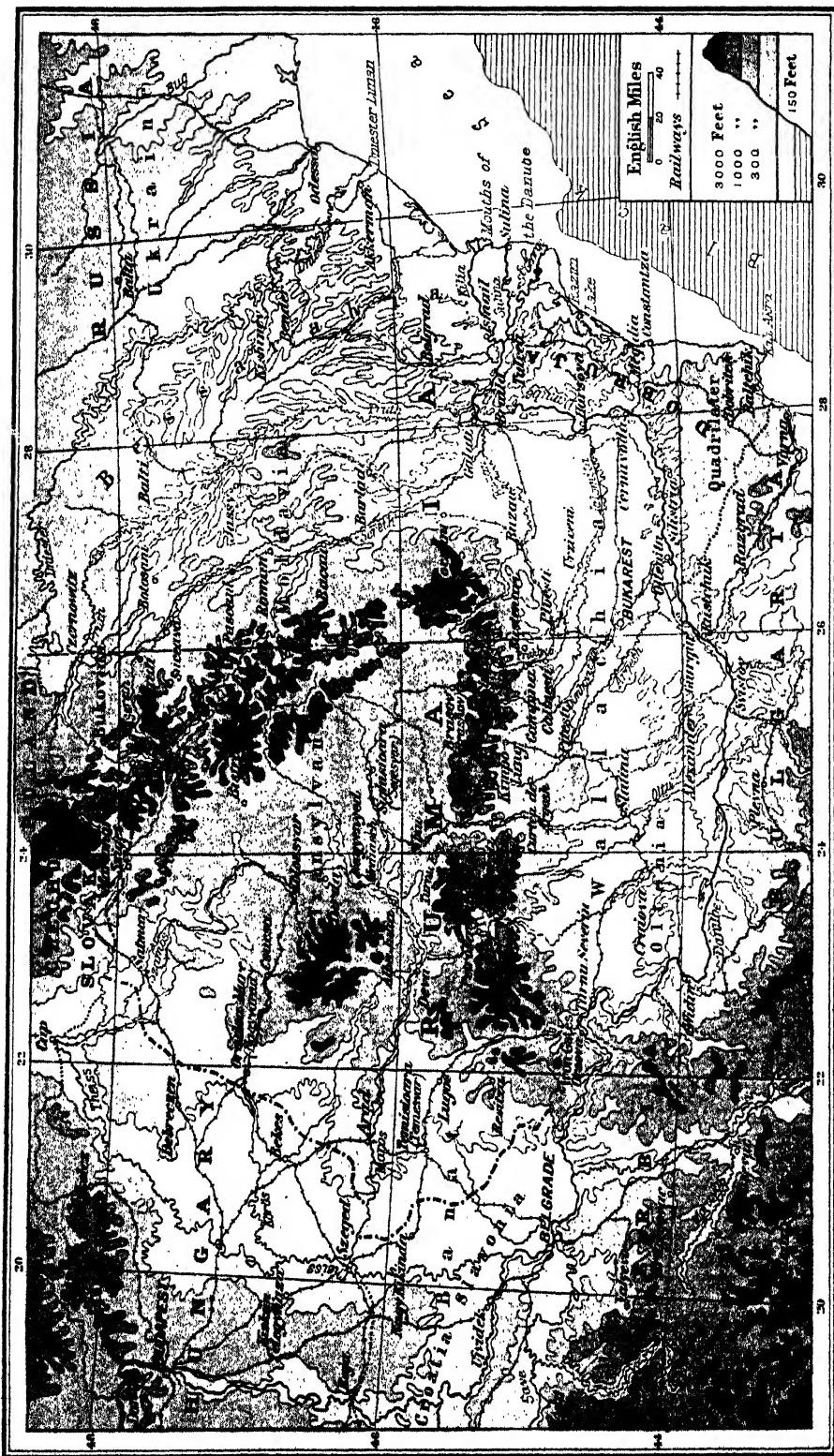
Feature of Physical Variety

It is this physical variety that makes Rumania such a fascinating land, for in a day's travel one may pass from the impressive beauty of the Carpathians, the mountainous backbone of the country, to the dreary Oriental monotony of the Bessarabian plain.

Of the rivers only the Danube and the Dniester, the latter half Russian, are of first-rate importance, though the minor streams, such as the Pruth, the Oltu and the Argesh, are useful in carrying the felled logs from the forests down to the plains below.

The vast fertile plains of Bessarabia, Wallachia and Oltenia are great wheat and maize areas; the mountains of Moldavia, Transylvania and Bukovina are rich in timber, while the great chain of lakes along the Black Sea coast and the rivers teem with fish. These lakes are so close to the sea that they have the appearance of lagoons; many of them contain water and mud of great medicinal value, providing baths for the rheumatic and gouty of the country.

Its position makes Rumania a land of climatic extremes; the summer, except in the hills, is a time of intense heat—Bukarest can often boast of



RUMANIA FROM THE DNIESTER TO THE DANUBE AND FROM HUNGARY TO THE BLACK SEA

100° F. in the shade for days on end—so that from June to the middle of September many of the business houses are closed after midday; in the Dobruja there is often no rainfall for three or four consecutive months.

In the winter—when 20° F. is not uncommon—from November to the beginning of April, snow falls freely, and the streets of the cities are covered with a thick layer of ice, which has to be removed with pickaxes; country villages are cut off from the towns, and the Danube is ice-bound for three months. This means that river traffic is at a standstill, and cargo vessels are frequently caught in the ice before they can seek refuge in the Black Sea.

As in Russia, the houses are expressly designed to render life possible during such extremes; double windows and tall tiled stoves fed incessantly with logs keep out the cold, while verandas and drawn blinds and shutters mitigate some of the ferocity of the summer sun.

The hill station system is in vogue, and most of the diplomats and society leaders spend the hot months in Sinaia, the summer residence of the royal family, founded by King Charles, in the Transylvanian Alps; their less lucky brethren, the business men, have to content themselves with week-ends.

The sea-coast is less popular, for communications in Bessarabia and the Dobruja are bad and the hotels offer little but shelter from the heat. A fortune awaits the enterprising financier who founds a Black Sea Brighton; indeed, Constantza in the Dobruja seems to show ambitions in that direction.



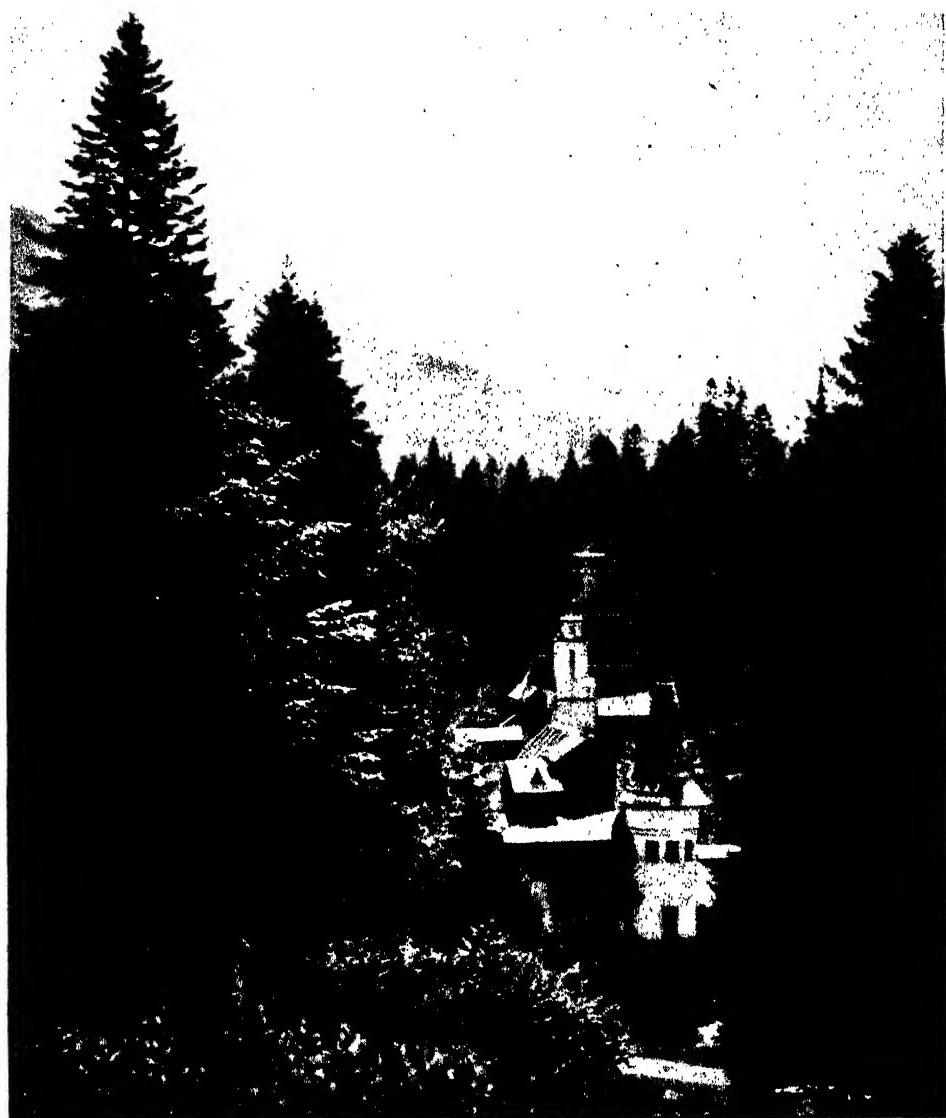
E. O. Hoppé

FORTIFIED CHURCH OF TRANSYLVANIA

On the railway line between Sibiu and Sighisoara, in the wine district of Transylvania, lies the small town of Medgyes, or Mediasch, one of the notable architectural features of which is an old church enclosed by a strong defensive wall.

Rumania is primarily an agricultural country. Legislation has resulted in the breaking up of the big estates and the handing over of 90 per cent. of the cultivable land to the peasants. The main effect of this has been to put a stop to revolutionary talk and action, an infection from over the Russian border, and to increase the interest of the peasant in his work; on the other hand, scientific cultivation has declined, for the owner farmer is content with smaller returns than was the aristocratic land owner, whose income, generally spent in Paris or on the Riviera, depended on the production of his wheat fields.

This situation is gradually being overcome by propaganda and the



E. O. Hoppé

PELESHOR CASTLE, IN THE HEART OF THE TRANSYLVANIAN ALPS

Sinaia, the lovely hill-resort, lies in north Wallachia, 70 miles north of Bukarest. Since King Charles built his summer palace, the Château of Pelesh, here about 1880, a modern town, with handsome villas which house the diplomatic and social world of Bukarest during the summer season, has sprung up. A second royal residence, the Château of Peleshor, was completed in 1903.

development of agricultural colleges, but it will be some time before the fertile soil of Rumania produces all it should do. Wheat and maize are the two main crops, the maize being chiefly for internal consumption, for the peasants live for the most part on "mamaliga," crushed maize, which is eaten either as a

sort of porridge with cheese and butter or as a loaf.

Vines are cultivated on the hill slopes of Moldavia and western Transylvania and in Bessarabia, and the resulting wines are excellent; unhappily most of them are drunk when insufficiently matured, so that they have

no time to become really valuable ; here again a little organization would produce wonderful results.

The chief drink of the peasants is "tzuica," a fiery plum brandy, the taste for which has to be acquired by practice. Once one has this taste few other

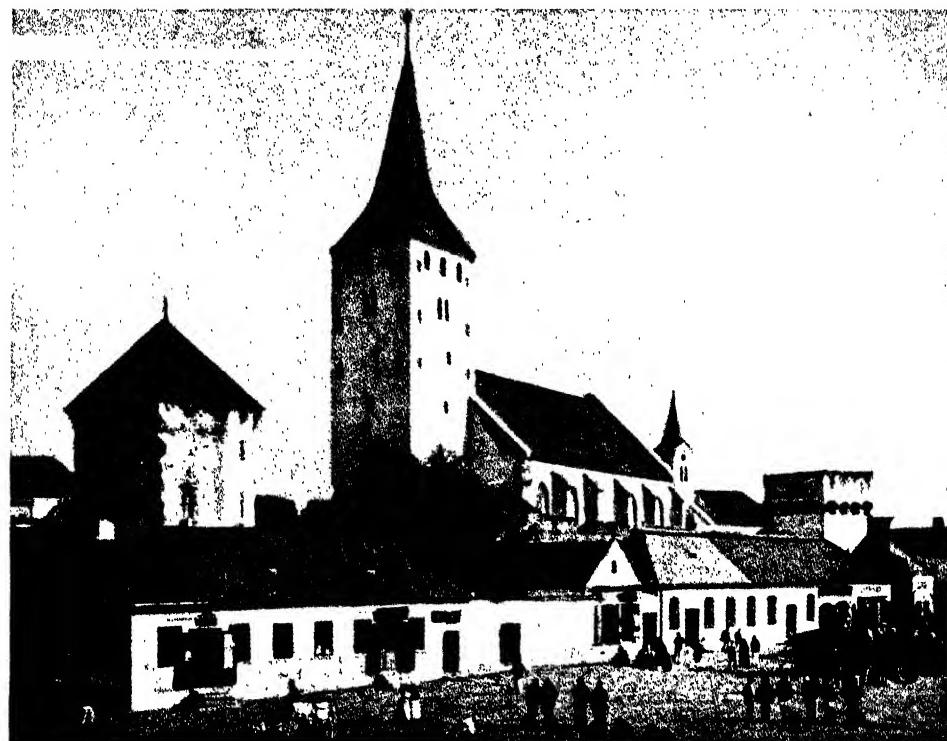
spirits are so much appreciated. The Rumanian peasant knows how to look after himself, and his simple diet is healthy and pleasant.

Fruit of every kind is abundant, especially in the eastern provinces ; in the Dobruja and the Quadrilater, the



RURAL SCENE IN A RUMANIAN-RUSSIAN BORDER VILLAGE

Bessarabia, the eastern portion of Greater Rumania, formerly part of south-west Russia, is very fertile ; cereals, fruit, flax and tobacco are produced extensively, and stock-rearing is a leading industry. This little hamlet near the Russian frontier bears the name of Ciopleni, and contains many primitive-looking dwellings, for Bessarabian villages are usually sadly behind the times



OLD FORT AND CHURCH OF NAGYENYED TRANSYLVANIA

Like Nagyvarad, Nagyenyed was formerly in Hungary, "Nagy" being a Magyar word signifying "great." It lies in Transylvania, now a province of Rumania, several miles north of Alba-Julia, and contains a Protestant seminary originally founded in 1628 in the latter town. Above are seen the church and the Old Fort; other notable buildings include a prison and a school of viticulture.

district taken from Bulgaria after the Balkan War of 1913, water and yellow melons are very plentiful, so much so that they are used as food for pigs.

The most common domestic animals are dogs—every village is full of great ferocious yellow beasts that run snapping after each passing motor; oxen, used for all kinds of haulage; water buffaloes, prehistoric looking animals, which are taken down to the sea to bathe; donkeys and goats. A great deal of the good stock was lost during the War, but with importations of blood stock from England, and reparation stock from Germany and Hungary, the situation is improving, and farmers are replenishing their cattle stalls.

The sheep are of poor quality, and during the spring there is a great slaughter of lambs for eating purposes. In the early months of the year one meets huge flocks, guarded by wild

looking shepherds, making their way from the plains to the mountains. These men take all their belongings in small haversacks, and sleep in the open during the summer. They are beautiful flute-players, and the mountains ring with their strange and haunting melodies. In the autumn they return to the plains.

The countryside teems with animal and bird life; in the Carpathians bears and wolves may still be found, and many a peasant meets death from these animals in the lonely mountain passes. King Ferdinand loved nothing better than a bear hunt in the remote districts of his kingdom.

The estuary of the Danube is a sportsman's paradise; all kinds of water-fowl are to be found, and fish—sturgeon, carp and salmon—are plentiful. The fishing industry is a government monopoly and is badly organized. Attempts

at preservation and cultivation have been made, but development is delayed by a shortage of funds. Some of the best caviare in the world comes from Rumania, but it is mostly sold for the export trade, and the inhabitants of the country can only get it with a government permit or by paying exorbitant prices.

After agriculture, the production of petrol is the most important industry of Rumania. There are two main oil districts, Campina-Ploesti and Bacau, the former between Bukarest and Sinaia and the latter in Moldavia.

Nothing is uglier than an oil-field. Tall, triangular derricks rise from the slopes of the foothills, scarring the countryside. From them hang steel cables, which descend into the bowels of the earth and draw up the precious liquid in narrow tubes. The ground is sodden with thick black oil, and the beauty of nature is utterly destroyed. The industry is mostly in the hands of semi-Rumanian companies, such as the Astra and Steaua Romana, branches

of the great international oil trusts. Many of the engineers are Englishmen, who spend their lives as exiles on these foreign fields.

During the Great War many of the wells were destroyed to prevent them from falling into enemy hands, and in 1918 only 459 out of 1,000 productive wells were intact. Reconstruction was gradually carried out by means of foreign capital, and exports are steadily increasing. A great proportion of the oil is carried by pipe-line to Constantza, the Black Sea port, whence it is taken by tankers all over the world.

Where there is oil there is often natural gas, a useful source of energy. In Sarmasel, Transylvania, the independent natural gas source produces 36,000 cubic metres of 99 per cent. methane gas per hour. This is the fourth greatest source in the world.

Iron, coal, silver, gold and salt are found in various parts of the kingdom. The gold comes from Transylvania and the supply is the most important in Europe. Queen Marie wore a crown



NAGYVARAD, AN ANCIENT TOWN IN WEST TRANSYLVANIA

The old town of Nagyvarad, now called Oradea Mare, is said to have been founded by S. Ladislas in 1080, and lies on both banks of the river Körös, 160 miles by railway due east of Budapest. The vineyard-clad hill-slopes north and east of the town produce excellent wine and in the vicinity are warm springs, which were famous in the days of the Romans

made from the product of these mines at the coronation at Alba-Julia in 1922.

All the other mineral industries are capable of great development, especially that of the salt-mines, which are exploited by the government. They are worked by convicts, who lead a terrible existence underground, in gloomy chambers lit by a weird blue light. The atmosphere is bitterly cold and damp and few survive long. Many of the life convicts retire underground with their families and never see the light of day until death releases them. It is a medieval form of punishment, hardly in keeping with modern ideas.

Great European Steel Centre

The great iron works are at Resitza, near Temisioara. Before the Great War this concern belonged to Austria-Hungary, and was one of the biggest steel and munition producing works of Europe. Production decreased after 1918, owing to continual financial scandals and disagreements. Now the method of exploitation has been stabilised, and big developments are expected.

Rumania is a country whose prosperity depends to a great extent on satisfactory means of communication. Its wealth consists of exports, and without efficient transport trade is terribly handicapped.

Trade Cramped by Communications

Bukarest is a terminus of two great European expresses, the Simplon and the Orient, and yet the railway system of the kingdom remains sadly inadequate. There are many causes, but the chief are national inexperience and the inevitable results of the Great War. The internal lines are state owned and perhaps for that reason badly run. Accidents are frequent, and hardly a month passes without a railway disaster. This is due partly to the poor pay offered to engineers, who simply cannot afford to serve the state, and negligence in maintenance of the permanent ways.

In the new provinces real difficulties were encountered after the Great War; most of the lines were based on Budapest

instead of Bukarest, and in Bessarabia the Russian broad gauge was in use. Conversion to standard Rumanian gauge has recently been accomplished, after a great deal of trouble and delay. In addition, rolling stock was in a deplorable condition; there were no means of repairing it in the country and no funds for having it repaired abroad. This is a situation that will eventually right itself.

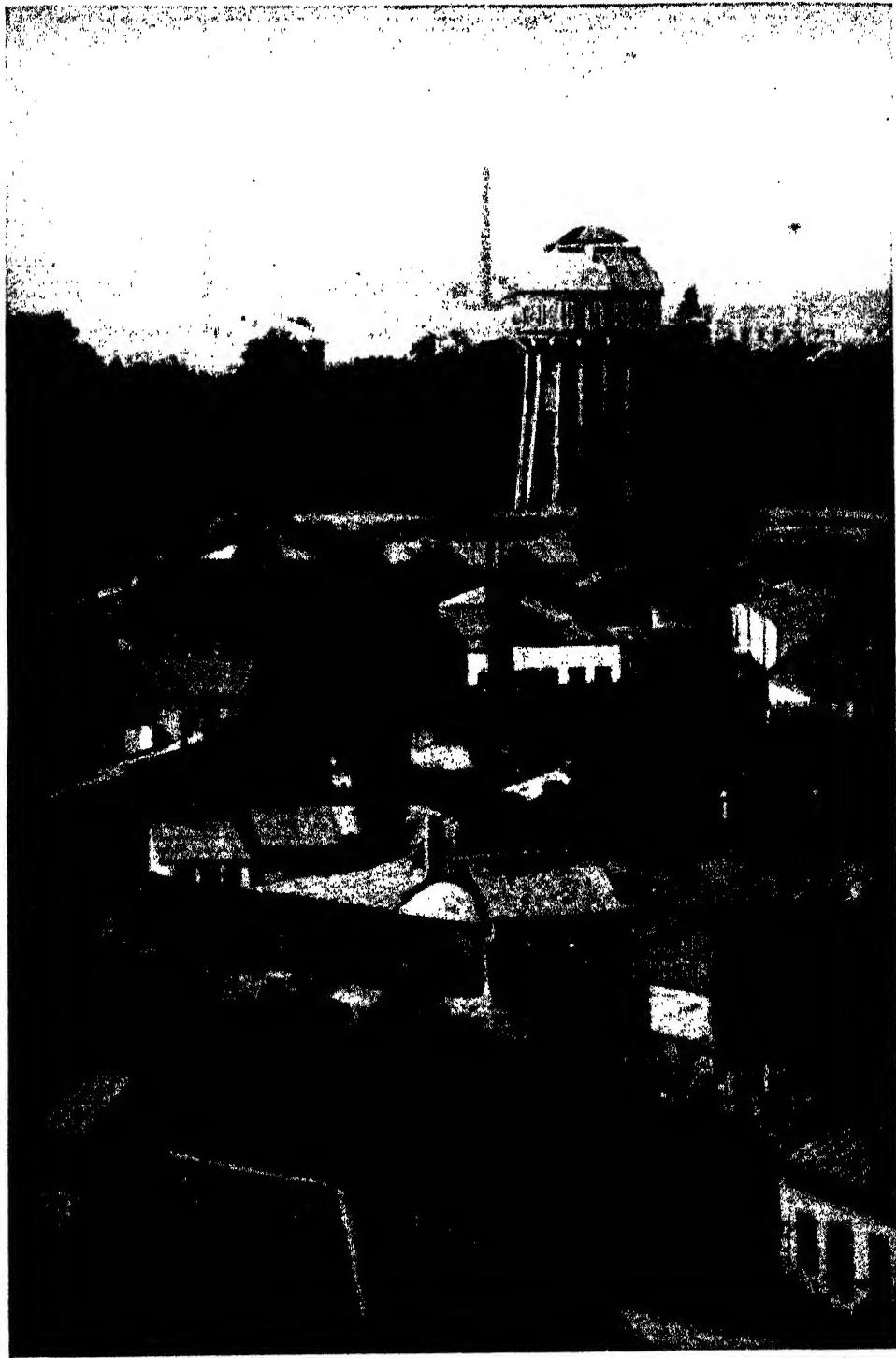
The Danube should be a valuable means of communication with central Europe, but the main Rumanian traffic is downstream from Galati and Braila to the Black Sea. International jealousy and exaggerated customs restrictions have resulted in an almost complete stagnation of international Danube traffic, and one can often travel right along the Rumanian section from the Iron Gates without meeting a single up-going cargo-boat.

Through the Famous Iron Gates

The mouths are maintained by an international commission, with headquarters in the free port of Sulina, but the inland waters are in the hands of Rumania, which country is responsible for the good order of the river. The most impressive portion is without question the Iron Gates, one of the wonders of Europe. One passes in the quaint little Serbian steamers through a narrow gorge, at one point only 116 yards wide, with great perpendicular walls of rock rising majestically on either side, and the water tearing through at tremendous speed, broken only by dangerous whirlpools. This pass into Serbia and Central Europe should be one of the most important river highways of the world.

Air traffic is in process of development, and Bukarest has its aerodrome, from which regular lines run to Belgrade, Prague and Budapest, and thence across Europe to Paris.

The roads of Rumania are excellent for ox traffic. For motor-cars they are suicidal. Modern systems of repair are quite unknown, and the Rumanian road



E. O. Hoppe

BRAILA, HEADQUARTERS OF THE GRAIN TRADE OF WALLACHIA

Braila is an important river-port situated on the Danube about 100 miles north-east of Bukarest. Its commercial activity, severely injured by the Great War, soon recovered, and it has a large trade in petroleum and grain. Immense warehouses and elevators have been erected by the government for the storage and export of the latter commodity, while candles, soap and rope are manufactured



TIME-MELLOWED RUINS OF THE FORTRESS OF SUCEAVA, AN INTERESTING HISTORICAL TOWN IN NORTH MOLDAVIA
Underwood
A very old town in Bukovina, Rumania, is Suceava, or Suczawa, lying on the river of the same name about 50 miles by railway south of Czernowitz. Of great historical importance, Suceava was the capital of the principality of Moldavia until 1561, and the residence of the Moldavian prince, Stephen the Great, 1457-1504. In the old fortress, or "Cetate" as it was called, this prince, one of the greatest national heroes in the history of the Rumanian people, once lived; now all that remains of that mighty stronghold, besieged repeatedly by Poles, Hungarians, Tartars and Turks, is some scattered ruins, grass-grown and deserted.

surveyor contents himself by upsetting a cartload of jagged flints into any holes, with the sure knowledge that the stones will eventually be broken up by passing traffic. It can be imagined how tyre manufacturers prosper in such a country, and why motor tours are not yet common among the leisured classes.

In the lonely country districts there is a very real danger of being held up on the roads. Bandits are in the habit of arranging wire traps or wagons across the highways, and motor-cars are stopped, while their occupants turn out their pockets.

The police are helpless to stop this form of crime, for most of them are badly armed or hardly know how to fire a rifle, and they are taken from a very poor class, without initiative. Thus the roads are left to the peasants, who sprawl across them with their great cartloads of hay and wheat, caring little for any regulations or traffic laws that may exist.

Unwise Commercial Policy

Rumania's great need to-day is increased exports; only by this means can it hope to return to normal conditions. Up to the present foreign trade has been hampered by intensive protection, which has brought reprisals abroad, and continually changing government control, which has simply served to exasperate traders.

British trade is in the hands of a few great companies, such as the Levant Company, that provide the Rumanian with goods which he cannot produce at home, and assist him in his exports. England has found it difficult to compete against rivals such as Czechoslovakia and Germany, favoured by their exchanges, but at last a little headway is being made, and the volume of trade is slowly increasing.

Rumanian business houses are mostly managed by clever Jews, many of them from Transylvania and Bukovina. The average Rumanian is disinclined to do his business himself, so that matters

have gradually been taken out of his hands. Each village has its Jew trader, who exploits the peasants and markets their goods. This system has resulted in sudden outbursts of anti-Semitism, sometimes assuming alarming proportions. But it is essentially the fault of the Rumanians themselves.

A Picture by Grigorescu

The countryside of old Rumania is intensely picturesque, for at every turn in the road one comes across little scenes that remind one of the pictures of the great painter Grigorescu. It is a land of smiling cornfields, of quaint straggling villages with their white cottages, of mysterious forests, and of green mountains pasturing vast flocks on the slopes.

The great white patient ox is the symbol of Rumanian village life; it is he who does the ploughing and the carrying, driven by the brown-skinned peasant in his embroidered smock, his tight trousers and his tall sheepskin cap. The women, when they are not toiling in the fields, are to be seen sitting on the verandas that run round their cottages, spinning or tending their swarm of half naked children. Their cottages are beautifully simple, with their white walls often covered with bright designs in blue and red.

Rumanian Village on Holiday

The road running through the village is bordered by an open ditch, which serves the villagers as a drain, and every few hundred yards are wells, surmounted by long poles, from which hang the rope and bucket. On a fête day the local inn is filled with laughing girls with heavily embroidered skirts and blouses, and scarlet or white handkerchiefs on their heads, ready to dance the "hora" with the men, who wear little flat black hats or sheepskin caps. It is all very primitive and attractive, and one can understand how it is that no one who has ever lived for any time in Rumania can forget the indefinable fascination of the country.

In the new provinces, such as Transylvania and Bukovina, there is a great difference in the architecture. Once across the old frontier, one finds villages that might easily be dumped down in south Germany without the inhabitants feeling astonished. There is the essential Teutonic neatness and the charm that still lingers in some corners of the land of Santa Claus. The towns give one the same impression.

One forgets that one is in Rumania, and fully expects to see a little clump of stiff Prussian officers sitting over their lager in the cafés that border the square. Koloszvar, Sibiu and Brasov are all beautiful old towns, with many fine ancient buildings—but they are not typical of Rumania, or at least of Rumania before the Great War.

Transylvania has always been famed for its castles, perched on almost inaccessible rocks. Queen Marie owns one of these at Bran just outside Brasov, a perfect relic of the wars of

the Middle Ages, which she has furnished in medieval style. There are few more beautiful spots than this to be found in Europe.

In old Rumania there are few provincial towns that are not ugly, because of the lack of ancient buildings. Centuries of invasion have meant continual devastation, so that Jassy and Craiova, though possessing a certain charm, have little to commend them to the architect. But the monasteries remain as memorials of the past, generally situated in the most picturesque surroundings.

These ancient institutions have their place in Rumanian history, both as the centres of insurrection against foreign tyrants and as the refuges of native princes fleeing from their enemies. The monks, with their black gowns and their strange inverted top-hats, live useful lives instructing and educating the peasants and carrying on agriculture and where possible viticulture.



E.H.A.
EVERYDAY LIFE IN ONE OF THE PRINCIPAL SQUARES OF TEMISIOARA
Once a royal free city of Hungary, and known as Temesvar, Temisioara is now the chief town in the western part of Rumania. Lying in a plain on the Bega Canal, it is the collecting and distributing centre for the fertile Banat; there are some flourishing industries and several tobacco, leather, cloth and paper factories greatly add to the town's general prosperity.



E. O. Hoppé

CELEBRATED RED TOWER, HISTORIC LANDMARK OF RUMANIA

The Turnu Rosu, or Red Tower, rises 17 miles south of Sibiu in the Transylvanian Alps, at the south end of the famous pass of the same name, which is traversed by an old Roman road still known as the Trajan road. The tower, built in 1533, has played a significant rôle in history, guarding the entrance from what was formerly Hungarian territory into Wallachia, Rumania.

In talking to a Rumanian it is as well to remember that he is a Latin, for if you airily mention the Balkans in speaking of his country, he will spend some time in explaining to you that he has nothing in common, either geographically or ethnologically, with the Balkan peoples. And he will be perfectly right. Most foreigners have a very hazy idea of the geography of eastern Europe, and are inclined to lump all the peoples of that part of the world into one.

The Rumanian is above all a Latin, with a great pride in his ancestry. In spite of the invasions of hordes of strangers from all sides, he has main-

tained his racial independence, and he resents being confused with the Bulgarian, the Serb or the Magyar.

There are three classes: first the aristocrat, generally descended from one of the old families who ruled the original principalities. He is very cultured and hospitable, possesses a great charm of manner and regards Paris as his spiritual home.

His sisters are in nine cases out of ten beautiful girls, with a perfect taste in dress. In this class one finds many "princes," but only a few have the right to the title. All titles were abolished when King Charles came to the throne, but as a courtesy the heads



E.N.A.
RUMANIAN PETROLEUM INDUSTRY : OIL WELLS AT BUSTENARI SUNK IN THE RIVER BED IN THE PRAHOVA VALLEY
Petroleum is one of the richest of Rumania's products, and large deposits are found in the region of the hills, particularly in the districts of Prahova, Dimbovitză, Burzău and Bacău. Prior to the Great War the output exceeded 2,000,000 tons annually; the industry is gradually recovering its former prosperity, and at Constantza, on the Black Sea, are enormous tanks and refineries whence the oil is shipped to many foreign lands. Some of the most productive wells are found in the Prahova district round Campina and Calinesti, and at Bustenari, a short distance to the east of Campina, some wells have been sunk with considerable success.



PETROSENY, A GROWING MINING VILLAGE IN THE HIGHLANDS ON THE SOUTHERN BORDER OF TRANSYLVANIA

Transylvania contains considerable deposits of minerals, including coal and iron, which form the basis of an important iron and steel industry. In a fine mountain valley between the northern slopes of the Transylvanian Alps, which are the south-eastern section of the Carpathian range and form the southern boundary of the plateau of Transylvania, is situated Petroseny, or Petrozseny, a large mining village with some 12,000 inhabitants. It lies at a height of 2,000 feet above sea-level, and is noted for its extensive coal-fields which lie on either side of the railway running south to the Szurduk Pass, with a line to Lupeni, another mining centre.

of the ancient families were allowed to call themselves prince. Nowadays every family has apparently about a dozen heads.

Next come the professional classes, the doctors, some of whom are internationally famous, the musicians, mixing a great deal with the aristocracy, the judges and the officers. The two last have little social standing, for the law in Rumania is not respected and the army is not regarded as a first-class career. It is a pity that this class is not more looked up to, but its position is very inferior, and on the whole its members have little culture.

At the bottom in rank, but at the top in importance, come the peasants, the real rulers. Of this class are the priests, who are generally, however, of very poor education.

The Rumanian peasant is a splendid fellow. Short, sturdy, dark-skinned, he makes a magnificent soldier, capable of subsisting for days on a handful of maize. He was badly led during the Great War, but in spite of this he showed his wonderful quality and stood firm, while his Russian allies deserted him and taunted him with revolutionary propaganda.

He is above all conservative and level-headed, and as long as he is given the means of existing decently, he will be

content. He treats his wife in true Oriental manner, making her toil in the fields and walk home, while he rides. But she does not mind, for it is the custom, and the influence of the Turkish rule of the past still remains in the hearts of the people.

Apart from the real Rumanians, the country has many foreign colonies. Throughout the Dobruja one comes upon villages that are wholly German, Turkish, Russian or Bulgarian. These people are the dregs of ancient invasions, retaining all their national habits, but submitting without question to Rumanian rule.

One accepts the situation, but it is somewhat disconcerting to come suddenly across a Tartar village, in which not one word of Rumanian is spoken. One of these is to be found outside Baltchik, the quaint little Black Sea port—in itself a perfect specimen of a Turkish town—in the Quadrilater. In this part of the country the Rumanians have some difficulty in keeping order, for Bulgarian comitadjis have a nasty habit of dashing across the border and carrying out an old-fashioned but nevertheless effective raid. Such problems must be expected to follow the arbitrary partition of south-eastern Europe that followed the Great War—and they are problems that only time can solve.

RUMANIA: GEOGRAPHICAL SUMMARY

Natural Divisions. The Transylvanian plateau between the Carpathians and the Bihar Mountains. The eastern Banat, an elevated land at the end of the Carpathians. The plains, where the Danube, Sereth, Pruth, Dniester, with their affluents, fill the wide troughs between the relatively recently upfolded Carpathians and older and more settled land blocks.

Climate. Continental; intense summer heat, severe winter cold, short springs and autumns. Frozen rivers. Summer rainfall. Annual rainfall small in quantity. (Cf. Dobruja.)

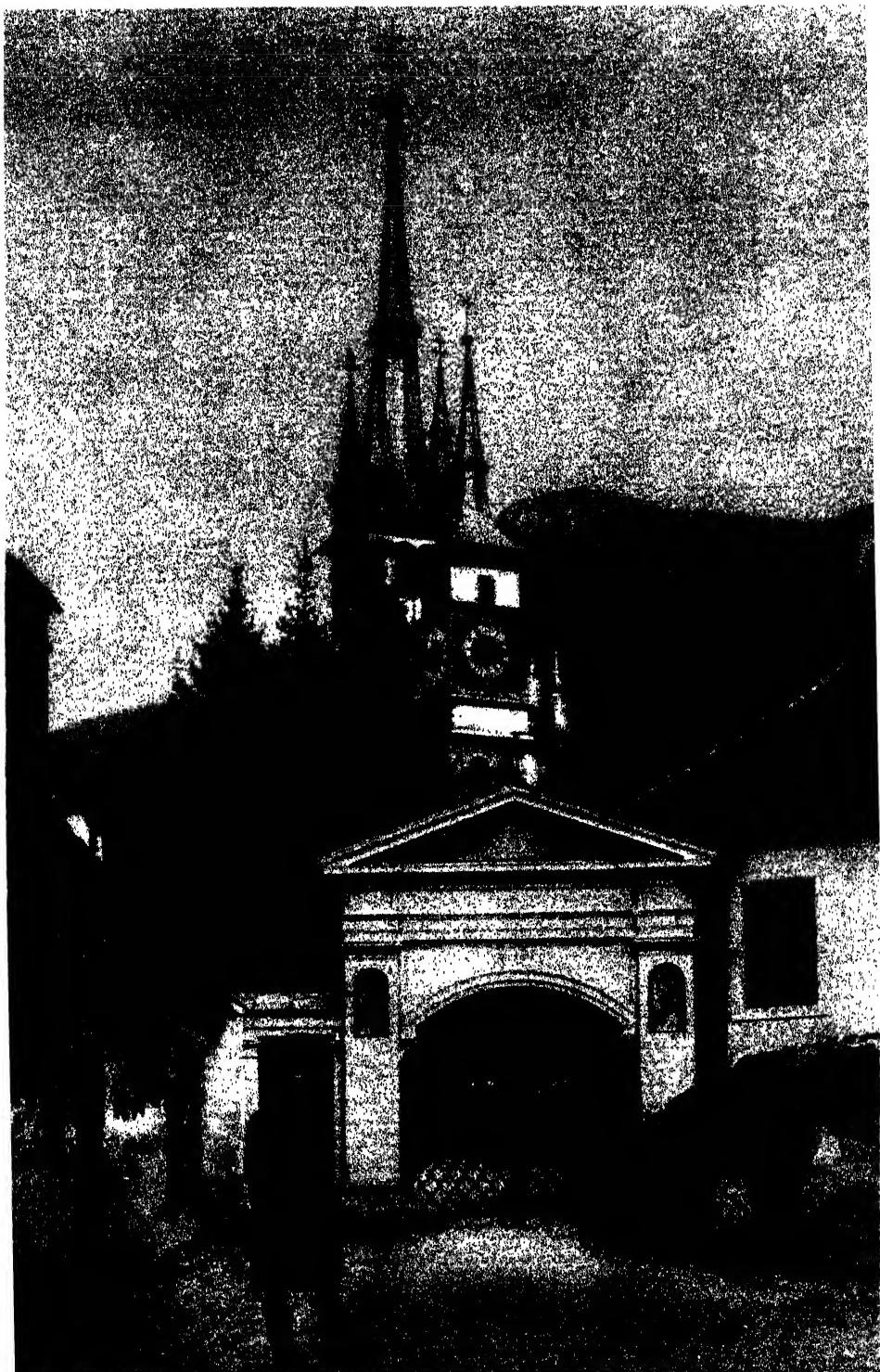
Vegetation. Forest on the slopes. Upland meadows (sheep walks) on the Carpathians. Steppe on the plains of Wallachia, Bessarabia, etc.

Products. Wheat for export, other cereals, chiefly maize, for local consumption. Sheep-rearing provides an example

of nomadic life in Europe, as the sheep are moved from the uplands to the Danubian meadows in the autumn (transhumance). Grapes, plums; petroleum; iron goods; a little gold; salt.

Communications. Roads are bad. Railways are being unified to one gauge and await development. Traffic on the Danube, except near the mouth, is unimportant.

Outlook. The Rumanian, like the Pole, has minorities of Germans, Magyars (Szeklers), Ruthenians and many urban Jews. The middle-class is of little importance, and the landholders have been stripped of their large estates. Every department of national life has been disturbed since the Great War, and a land-hungry people has yet to learn that, in Europe, at least, national prosperity depends on trade on a large scale with other countries.



E. N. A.

RUMANIA. *Spires, large and small, rise from the Greek church in
Alba-Julia, girdled by the lovely wooded hills of Transylvania*



E. O. Hoppe

According to a legend the beautiful wife of the master builder of this cathedral at Curtea de Argesh was immured in the walls alive

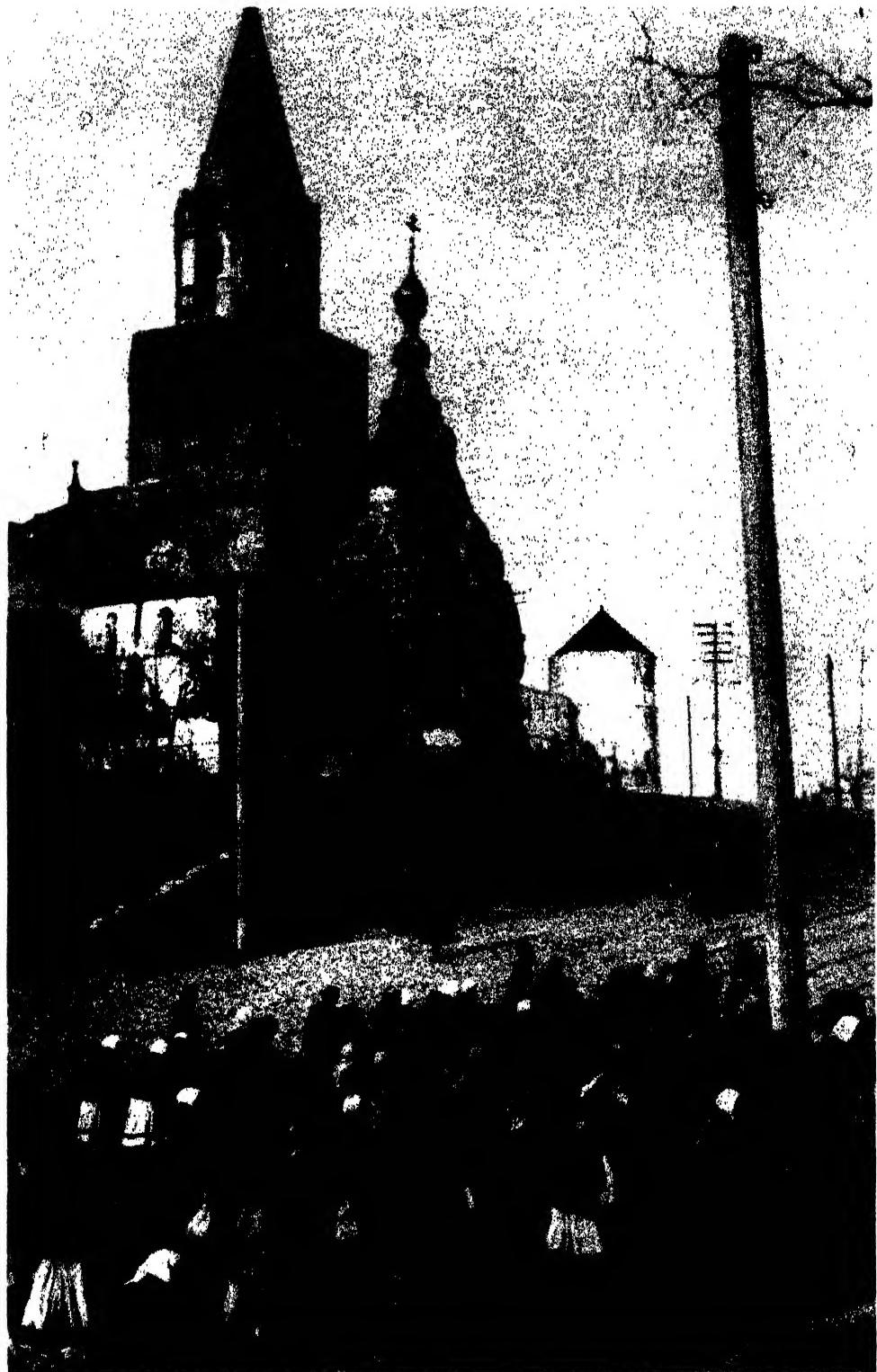


S. Petrescu

RUMANIA. *Columns of imaginative design and beautiful tracery ornament the old cloisters of the Hurezi convent in Oltenia*



RUMANIA. At the base of the old town walls in Sibiu there creeps a narrow, twisting lane beneath arches and buttresses roofed with tiles



RUSSIA. Here the funeral of a famine victim, only too common a sight, is passing the Spasskiya Gate in the Kremlin at Kazan



Ewing Galloway

RUSSIA. In Nijni-Novgorod the Kremlin and Upper Town are connected with the Lower Town by steep roads and rack-railways



Florence Farmborough

About this wooden country house near Moscow stretch lovely grounds, unfenced and merging into the neighbouring woods

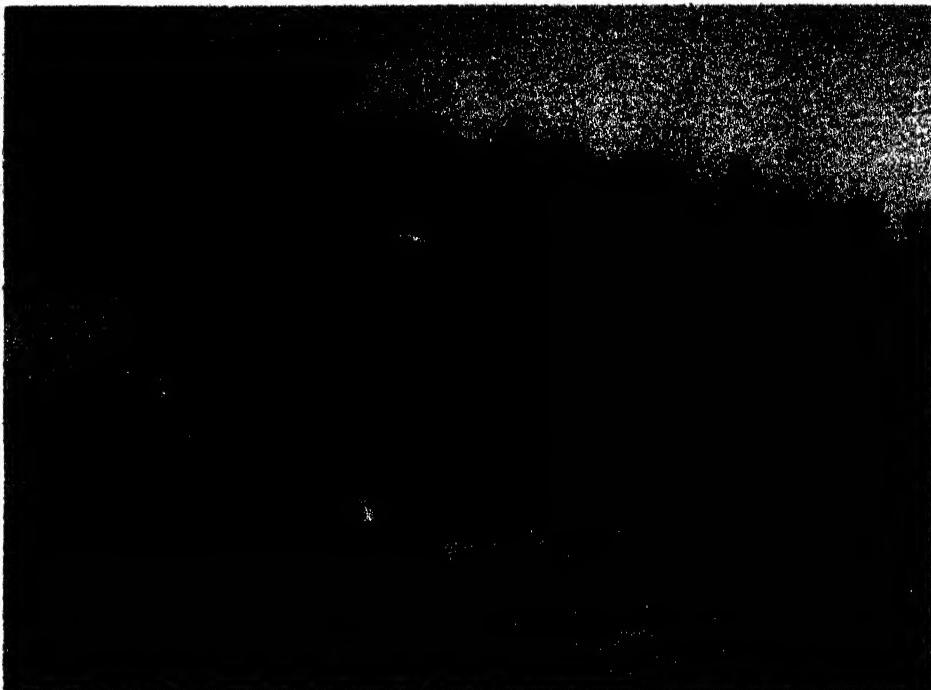


RUSSIA. From the top of a hill in Kiev S. Vladimir looks down upon the Dnieper and over the plain watered by many streams



E. N. A.

RUSSIA. Beside the mosque in Gourzouff rises the minaret which
dominates this little village on the Riviera of the Crimea



Florence Farmborough

Turks bring their pack-ponies down to the stone-strewn beaches of the Black Sea to collect material for mending the Crimean roads



Russia. Near Aloupa on the southern coast of the Crimea this solitary fisherman's hut shelters behind a massive boulder

RUSSIA

Far-stretching Plains of Eastern Europe

by Maurice Baring

Author of "The Mainsprings of Russia"

THERE are three cardinal facts about Russia. It is an immense country; it has a continental climate, and it is a country of colonists.

Most people know that Russia is a large country, but perhaps few realize that European Russia has an area of more than 2,000,000 square miles and is ten times as big as France and sixteen times as big as Great Britain and Ireland; that European Russia has a population of over 92,000,000 and the Russian Empire one of 124,000,000.

Russia has no indented sea-coast and its surface is uniform. It is in sharp contrast to western Europe, whose sea-coast is indented and whose physical features strike us by their variety. Russia has only one mile of sea-coast to forty-one square miles of continent. It consists almost entirely of a plain which extends from the Baltic Lands and the Carpathian Mountains in the west, to the Ural Mountains in the east, and from the Arctic Ocean in the north to the Black Sea, the Crimea and the Caucasus in the south.

"Twixt Europe and Asia

The surface of the plain is varied by clefts and chasms in it which have the false air of valleys; the tablelands never rise to a height of more than 300 to 1,100 feet above sea-level. Geographically Russia is the half-way house between Europe and the vast plains of Asia.

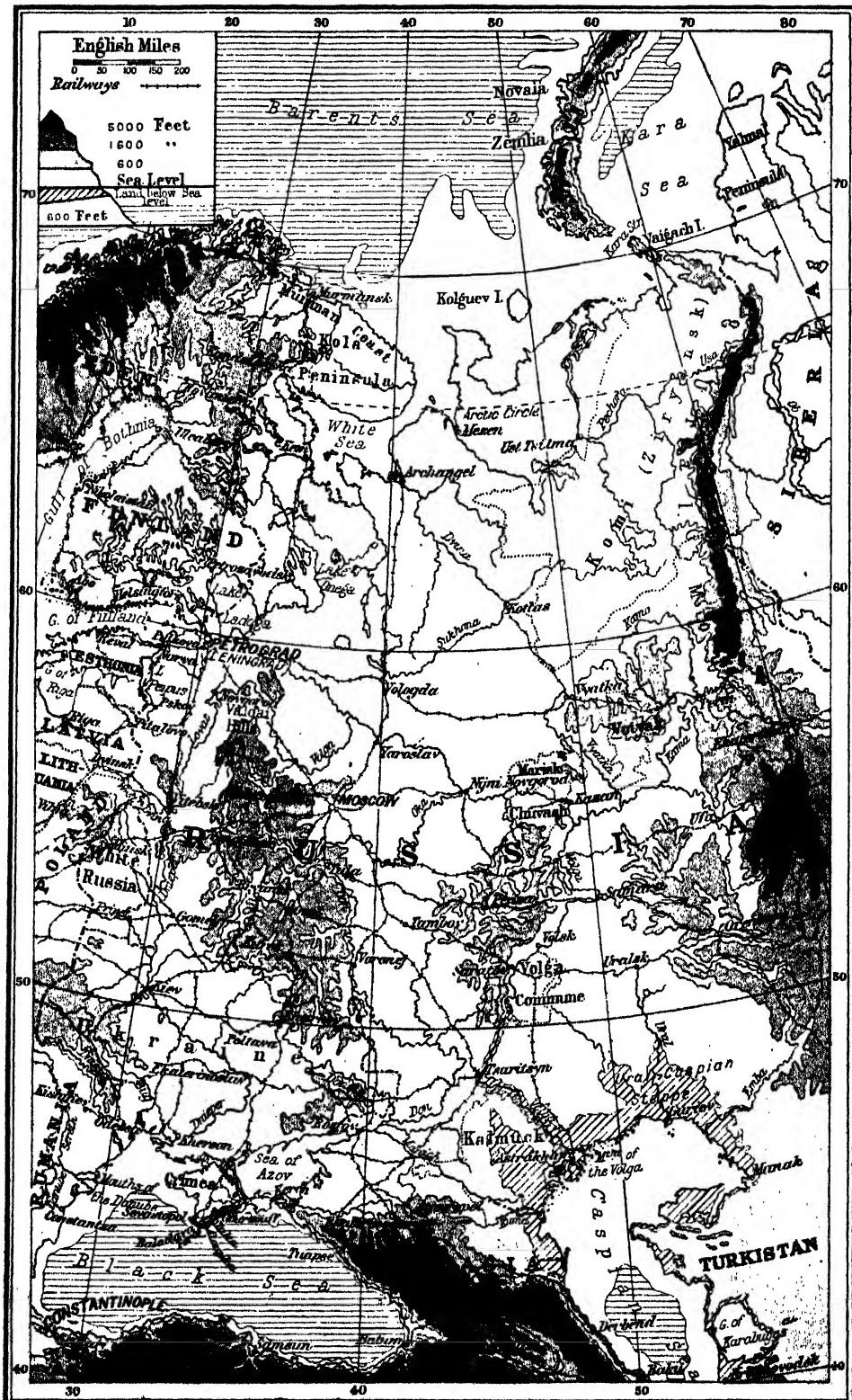
Western culture was unable to reach Russia by the sea because there was no sea-board. Expansion took place on land. Russia expanded slowly through Siberia towards the Pacific Ocean. As there were in Russia no great mountain

ranges running north to south or east to west, places which were widely apart enjoyed the same climate; and the physical characteristics as well as the landscape were distinguished by a monotony which exercised a direct influence on the character of the people. This uniformity made expansion easy as there were no obstacles in the way of it.

Russia's Haunting Monotony

The physical features of Russia are broad zones that merge gradually one into the other; the mosaic-like chequered areas of western Europe are unknown in Russia. If you are travelling in western Europe the landscape may vary from hour to hour, but you may travel for days in Russia without noticing a change.

The life of the people and the manner of cultivation are as uniform as the landscape. There being no mountains and no valleys, nature, landscape and the manner of life being more or less the same everywhere, the feelings and manner of speech of the people are naturally the same, too. In western Europe, if a man travels from one part of the country to another he will receive a series of fresh impressions and be aware of sharp contrasts. If he goes from the mountains to the valley, or from one province to another, he may find himself in less than a day's journey faced with an entirely different manner of life, unfamiliar clothes, strange customs, and an unintelligible dialect, but in Russia he can travel for miles and miles and for days, and even weeks, and find the language unmodified by a single intonation; the same landscape, the same manners and customs, the same animals and the same speech. In

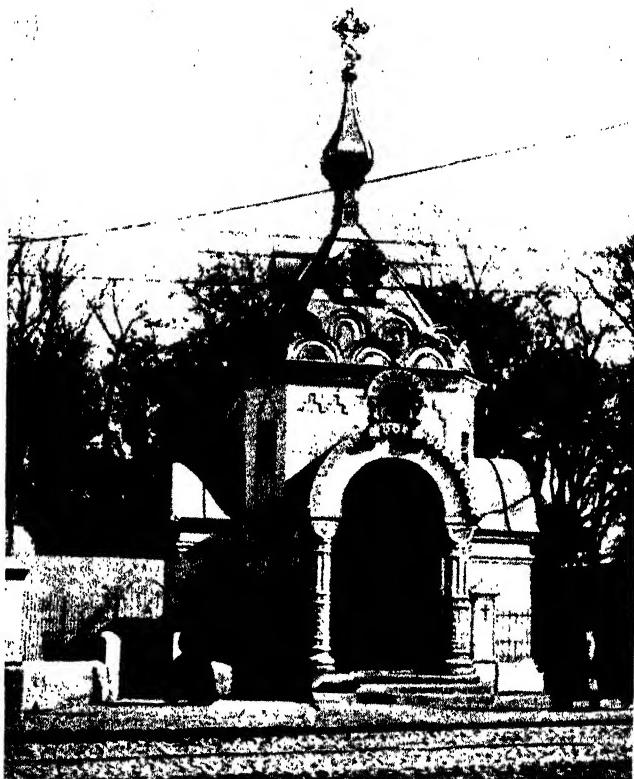


THE VAST, LEVEL EXPANSE OF EUROPEAN RUSSIA

western Europe the sharp contrasts of the physical features make travel more difficult ; sharp contrasts mean elevations, depressions, mountains, that is to say, obstacles ; and obstacles mean difficulties of communication. In Russia there are no such obstacles ; hence, easy expansion, emigration and the spread of population : a population that is spread thinly like butter over a large flat surface of bread.

There is nothing to prevent a Russian emigrating ; if he leaves his home and seeks a distant part of the country he will find exactly the same circumstances and manner of life as he has left behind. Since the Russian was able to adapt himself with ease to changed surroundings wherever he went, he felt a continuous impulse towards emigration and expansion. Thus civilization in Russia was spread in a thinner layer but more widely than in the countries of western Europe. The history of Russia is the history of the slow colonisation and, consequently, the civilization of the eastern European plain : that is why Russia is a country of colonists.

In countries where the physical features are uniform the soil is of great importance. Russia can, roughly speaking, be divided into two large areas ; the area of the woods and that of the plains. The woods extend from the north to the centre, the plains from the centre to the south. The area of the woods gradually yielded to the inroads of civilization. Many of the forests have disappeared. Corresponding with these two botanical areas, there are two kinds of soil.



Florence Farmborough

ONE OF RUSSIA'S WAYSIDE SHRINES

Throughout the length and breadth of Russia may be found the wayside shrine, housing the sacred ikon. Sometimes it is of stately architectural style, often a rude wooden shelter suffices, but alike the doors stand ever open inviting prayer.

In the north there is the zone of clayey and sandy soil and in the centre and the south a zone of black earth, gradually growing thinner until it becomes a sandy steppe. The vegetation in these zones is uniform and gradual in its variation.

In the extreme north there is a belt of marshes, no agriculture, and no cattle breeding. The temperature only rises above freezing-point during a few months of the year. The elk is the only beast on which the population can subsist. The woods of the northern area are unlike the woods of central Europe ; the undergrowth is wild, young trees and old trees grow together, the growth is slow, the climate dry, the soil ungrateful. The trees do not grow high, they suffer from wind, fire and man, who cuts down the finest for timber. In



Ewing Galloway

RIVER TRAFFIC AND WAREHOUSES AT NIJNI-NOVGOROD

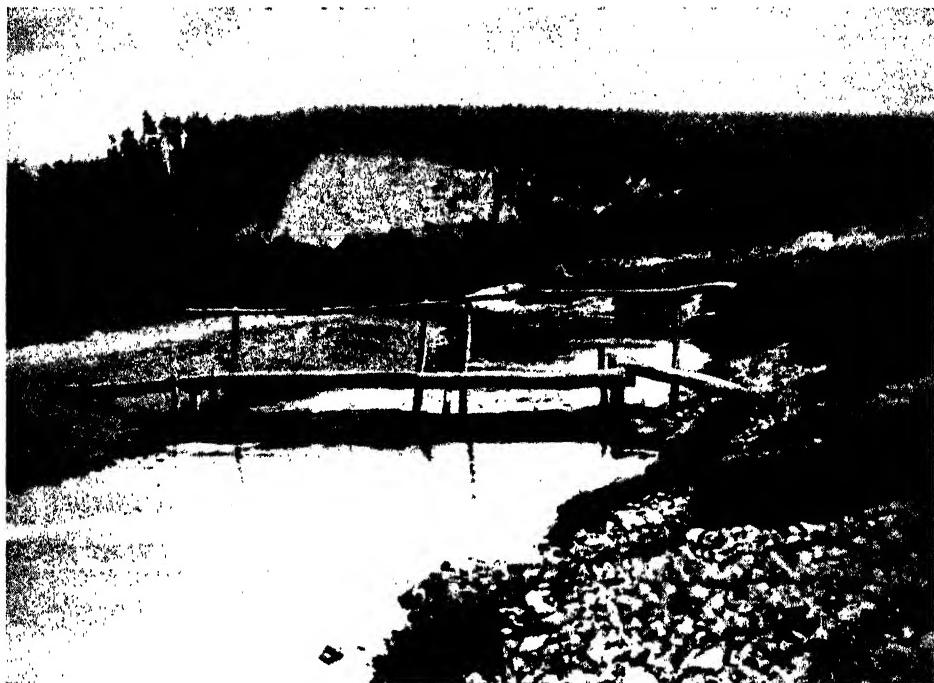
Nijni, or Lower, Novgorod lies at the junction of the Volga and the Oka, 250 miles north-east of Moscow. It is divided into three parts, the upper and lower towns and the suburb of Kunavino, and its chief importance lies in its brisk trade in cereals, metals and fish. A great fair, held annually, has a world-wide reputation, and draws Eastern and Western traders from many lands



B. N. A.

DISCHARGING CARGO IN THE HARBOUR OF ARCHANGEL

A city and seaport of North Russia, Archangel stretches for several miles along the right bank of the Dvina at the head of the Gulf of Archangel, an arm of the White Sea. The town has considerable commercial activity and in the harbour, which is well equipped and is ice-free from June to September, an extensive export trade in timber, wheat, flax, pitch and tar is carried on



Florence Farmborough

QUIET BEAUTY OF A RURAL LANDSCAPE IN CENTRAL RUSSIA

Although for the most part a monotonous plain, little relieved by any striking break of contour, the vast land of Russia can boast a great variety of scenery. Here in the Moscow district, Russia's greatest industrial centre, vale and wold are well represented, and the forest area, pine and silver birch, is considerable, while streams great and small intersect the landscape on every side.



Florence Farmborough

COUNTRY COTTAGE IN THE HEART OF THE RUSSIAN WOODLANDS

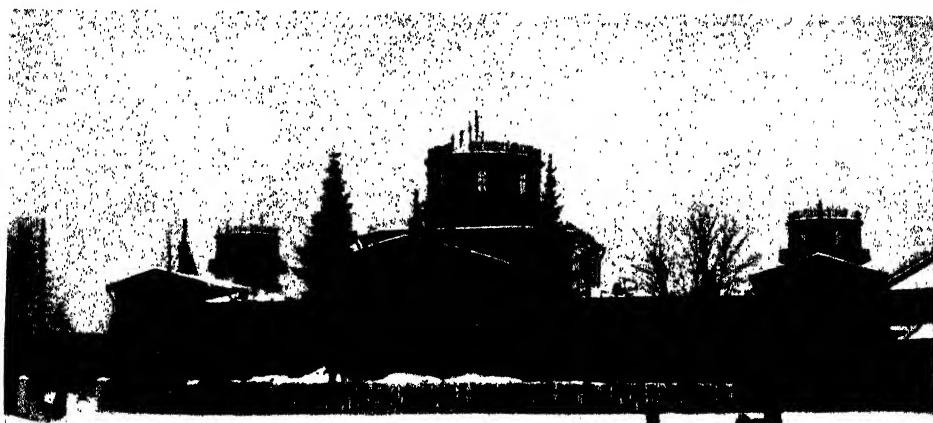
The Russian summer months see a general exodus of the townspeople to the country places, for with the advent of the warm weather, the "datcha" life begins. Then those who can leave the hot, dusty atmosphere of the town for the sweeter, healthier air of the country. The datcha, or summer cottage, is usually an unpretentious building, but varies in appearance and price according to locality.

this northern region, only trees of the fir tribe grow, although in some places the aspen and the birch are found isolated and in groups.

In the southern part of the area you will find the oak, the birch, the maple, the elm, the ash and the elder, but no beeches. There are beeches in the Crimea and in Poland but the beech cannot stand the climate of Russia proper. In the southern part of the wooded area, agriculture, although

wooded. To the south of the zone of black earth come the steppes which reach as far as the Black Sea. The soil here is of black earth, too, but it grows thinner as the steppes extend towards the south. There are woods here, too, but only in small and isolated groups near the rivers or in those places where trees can grow.

The zone of black earth is of great importance in Russia; the soil here is extraordinarily rich and consists chiefly



Underwood

WINTER VIEW OF THE ASTRONOMICAL OBSERVATORY AT PULKOVA

Near the village of Pulkova, some 10 miles south of Petrograd, and on a ridge of a hill from which a fine view of Peter the Great's city is obtained, stands the famous observatory, erected in 1839 by Tsar Nicholas I. at a cost of over £200,000. The meridian of Pulkova ($30^{\circ} 19' 40''$ E. of Greenwich) has often been employed in the construction of Russian maps

difficult, is possible, whereas in the northern part of the same area it is not even possible. In this densely wooded zone of clay and sandy soil there are lakes, marshes, some fields and a few human settlements. It becomes less and less densely wooded as it nears the centre; clearings become more numerous and human settlements more plentiful.

The zone of black soil in the centre is entirely cultivated. The wooded area of the north merges into it and overlaps it. There are also islands of woods throughout the zone, so that about one quarter of its surface is

of marl—a layer of black humus or leaf mould varying from eighteen inches to four and a half feet in depth, with a small proportion of clay mixed with organic matter. This black earth is infinitely rich and where it is cultivated forms one of the great corn supply zones of the world. In the Chernoziom steppes, which reach from the zone of black earth to the Sea of Azov and the Black Sea, are the lower basins of the rivers Dniester, Bug, Dnieper, Donets and Don. In the spring these steppes are changed into a measureless sea of grass, flowers and plants; the grass is sometimes six feet high. By July all this is burnt up and



R. N. A.

IN THE TARTAR QUARTER OF THE OLD MONGOL TOWN OF KAZAN

Kazan, the ancient capital of the Kipchak Khanate, lies in eastern Russia on the Kazanka near its confluence with the Volga. A strong flavour of the Orient permeates this old town, even some of the modern architecture displays marked Tartar characteristics, and no fewer than thirteen mosques are numbered among its ecclesiastical structures. Kazan has a flourishing commerce and many industries



Florence Farmborough

WITHIN THE CONFINES OF A CENTRAL RUSSIAN VILLAGE COMMUNITY

The average Russian village, usually lying close to a friendly forest, comprises a somewhat scattered collection of wooden houses, ranging from the one-room hut to the more commodious bungalow type of building. The peasant's plot of land supplies most of his needs, for, lacking the stimulus of competitive trade, he is unambitious and the wider activities of town-life seldom appeal to him

nothing but the dry plain remains. Cattle feed on the cut dried grass for the rest of the year. In winter the steppes are covered over with a mantle of snow.

To the south and east of these fertile steppes there are further arid steppes which are entirely desert. There is no black humus in the soil here, nothing but sand. Nearly all the lower course of the Volga, from Tsaritsyn to Astrakhan, falls in this region. To the north-east of the Caspian Sea the desert of rock and sand reaches to Turkistan. This Ural-Caspian steppe is the barest region of European Russia. The north of the Crimea is desert as well.

The black earth district contains all the cultivated plains of the south,

and stretches from the regions of Orel, Kharkov and Kursk in a north-eastern direction towards the Volga. Towards the west the climate grows milder, and agriculture is (or used to be) more advanced; much wheat and beetroot are grown. West of the Dnieper there are fruit-trees and vines. In the east the cultivation, until the Great War, was superficial; nevertheless, in spite of this, the black soil belt used to produce a very large quantity of corn for export abroad.

The river system of Russia is the most complicated in Europe. The rivers and their numerous tributaries form a closely woven network which covers the whole country. The great rivers of European Russia, the Volga, the Dnieper and the



Florence Farmborough

TOMBSTONES OF THE WEALTHY HEBREW COMMUNITY OF MINSK

The old Hebrew cemetery at Minsk is ablaze with gold and silver inscriptions on magnificent tombstones. Jews form half the population of this White Russian town, lying 275 miles north-east of Warsaw, and here some of the wealthiest Jews in Russia are found. Compelled to live by their wits, they employ no half measures and practically the whole of the trade is in their hands.



Florence Farmborough

FAR-FAMED CHURCH OF THE MONASTERY OF NEW JERUSALEM

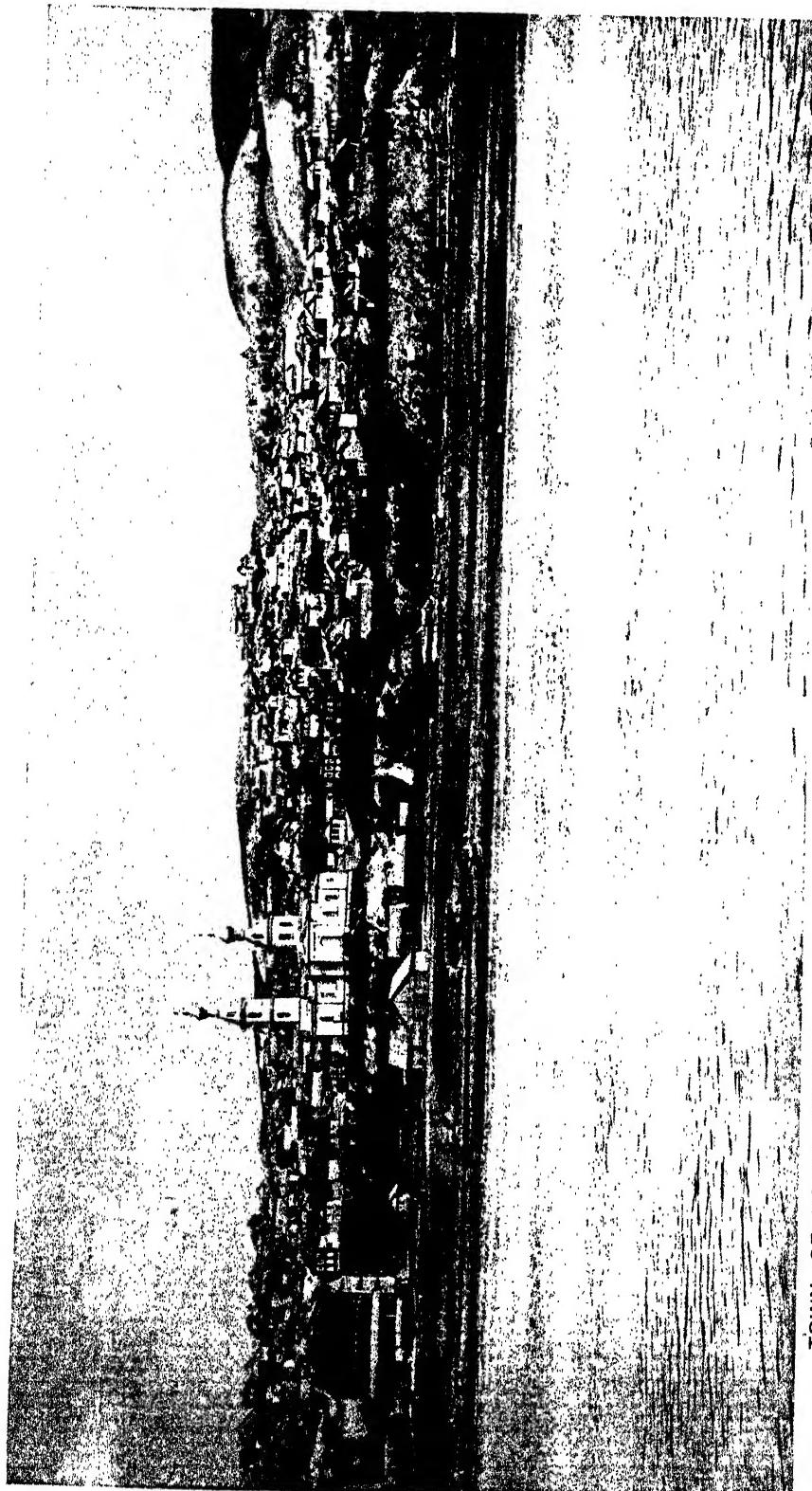
At Voskresensk nearly 40 miles from Moscow is situated the monastery of New Jerusalem, which has all the appearance of a fortress in its lofty encircling walls. Both the monastery and its immense Church of the Resurrection were founded by the Patriarch Nikon in 1657; the latter, 220 feet high, is modelled in the minutest particulars on the Church of the Holy Sepulchre at Jerusalem.

Western Dvina, have their sources at the foot of the Valdai hills. The Volga is the greatest European river, with the Danube next in length, while the other Russian rivers are longer and have greater basins than the rivers of western Europe. These rivers have numerous tributaries which are tortuous and sluggish in their streams. Russian rivers are sluggish because their sources are at a low elevation and so no strong current is possible. They are serpentine because the soil is flat and porous, and the waters wander at their will. The Volga is about 2,300 miles long, but the distance from its source to its mouth as the crow flies is only 1,043 miles. The river basins, consequently, are immense. The Dnieper is the only river that has rapids and falls. The rivers are generally navigable from their sources, and the tributaries are connected by canals.

Not one of these rivers flows into an important sea. The Arctic Ocean and

the White Sea, into which the Pechora and the Northern Dvina flow, are frozen during the greater part of the year. The Volga runs into the Caspian Sea. So the Russian rivers can only be used for internal trade. They are also subject to yearly floods. In the spring, when the snows melt, the rivers overflow their banks, and they are transformed into great sheets of water, and the meadows are flooded. These spring floods are nothing like the unexpected sporadic and disastrous floods sometimes experienced in France or England: they occur as regularly as clockwork, and are beneficial both to cultivation, navigation and trade.

The climate of Russia is as uniform and monotonous as its physical features. In the extremities, in Murmansk, in the Crimea and in Caucasia, you will find every kind of climate, but these extremities do not properly belong to Russia; they are annexes. In the main, the climate is uniform and continental.



TOWN OF VOLSK ON THE RIGHT BANK OF THE RIVER VOLGA, RUSSIA'S GREATEST WATERWAY

The Volga is the longest river in Europe; it rises in the Valdai hills and empties into the Caspian Sea near Astrakhan through a delta with nearly 200 mouths. It is over 2,300 miles in length and is navigable almost its entire course. The scenery has little variety—low marshlands alternating with forest land and hills of clay and sand—until the confluence with the Oka at Nijni Novgorod, beyond which steep slopes and considerable heights border the right bank until the Caspian depression is reached. The town of Volsk is spread on a high, almost treeless, chalk bank, nearly 100 miles north of Saratov.



MAY DAY CELEBRATIONS UNDER THE SOVIET REGIME IN KIEV, "THE MOTHER OF RUSSIAN CITIES"

Kiev, the capital of the Ukraine, is one of the oldest cities in Russia, its foundation being ascribed to the fifth century A.D. A very attractive town, it has many interesting old buildings, chiefly churches, and because of its situation on high ground commands magnificent views over the Dnieper and surrounding country. The first of May has always been the occasion for considerable rejoicing in Russia, perhaps because by this date the long, trying winter is assuredly over and gone; but May Day celebrations are by no means what they were in the days of Tsarist rule, and the Bolsheviks see to it that the event is observed in their own way.



Florence Farmborough

KIEV'S FINE SUSPENSION BRIDGE SPANNING THE BROAD Dnieper

Not far from the spot where the Dnieper flows by the Lavra hill it is spanned by the Nicholas Suspension Bridge. Supported by massive piers, this handsome structure continues across the islands formed by the river's branching arms on the left bank for some distance, making a total length of half a mile.

It was built in 1848-53 by an English engineer and cost about £265,000



Florence Farmborough

LOOKING TOWARDS PODOL, THE OLD TRADING QUARTER OF KIEV

Kiev enjoys a delightful situation on wooded heights that fringe the right bank of the Dnieper and rise in places almost sheer from the water's edge. The city includes Podol, the old commercial quarter on the north, inhabited mainly by Jews; the old town, the administrative centre; and Petchersk containing the Lavra and Military District. Lipski, an aristocratic suburb, lies south of the old town.



Florence Farmborough

FRESCO-ADORNED OUTER WALLS OF A YAROSLAVI SANCTUARY

Many Greco-Russian churches are rectangular in shape, with several domes gilded, silvered or painted a brilliant hue, and walls frequently embellished with frescoes. Yaroslavl on the Volga has some magnificent specimens of ecclesiastical architecture; several churches date from the sixteenth and seventeenth centuries and the Cathedral of the Assumption was founded in 1215.



Florence Farmborough

DOMES AND TOWERS OF A FAMOUS LAVRA IN A WINTRY LANDSCAPE

The Pecherskaya Lavra at Kiev is the most venerated monastery in South Russia. Founded in the eleventh century, it includes extensive catacombs and several beautiful sanctuaries, and is the resort of pilgrims. It was in Kiev during the tenth century that the Russians, under the saintly Vladimir, adopted Christianity; since then the city has been regarded as the "Jerusalem of Russia."



E. N. A.

SUMMER LUXURIANCE IN A SUN-BATHED DISTRICT OF POLTAVA

The landscapes of the Ukraine, or Little Russia, are wonderfully picturesque, southern sunshine and fertile soil imparting to them a beauty and profusion of vegetation undreamt of in the more inhospitable regions of the north. The country round about Poltava is especially fruitful, being within the rich wheat-bearing zone called the Black Earth belt, and watered by the Dnieper and its tributaries

**HOW LOADS ARE CARRIED AMONG THE RUSSIAN PEASANTRY**

The lack of many of life's conveniences fosters the spirit of invention in the Russian moujik. Singularly adept with his hands, he often turns out contrivances of considerable utility. Wood is his material; from it he fashions his hut, furniture, domestic utensils and many other objects too numerous to mention. The sleigh, though running best on ice and snow, is useful to the peasant at all seasons



E. N. A.

STATELY STRUCTURES OF THE IMPORTANT CITY OF ODESSA

One of the chief business centres in south Russia is Odessa on the Black Sea. It lies 25 miles north of the Dniester mouth and has considerable importance as the terminus of the South-Western railway and many steamship lines. This interesting and well-built city has much noteworthy architecture; above is seen the frontage of the Law Courts, beyond which rise the domes of the Pantaleimon Church



Ewing Galloway

CONGESTED WATER-FRONT AT ASTRAKHAN IN THE VOLGA DELTA

Astrakhan is one of Russia's most important trade centres in the region of the Caspian Sea. It is situated on an undulating island in the Volga delta, some 50 miles from the mouth of the main arm of the river. Most of these sturdy boats belong to fishermen, for fishing is the main resource of almost half the inhabitants, who are comprised of Tartars, Persians, Armenians, Kalmucks and other races

The only part of Russia which is influenced by the sea is the southern shore of the Crimea where the climate is still milder than that of the Riviera.

The variations in the climate from north to south and from east to west are slight as there is no mountain range in European Russia sharply dividing the east from the west, nor any horizontal range running from west to east.

Climatic Comparisons

There are no obstacles to the winds, and they have free play; consequently places which are widely apart have the same kind of climate. Neither the height of the land above the sea-level, nor the sea-board (since it is practically non-existent) play any part in the nature of the climate. The winter is extremely cold, and the summer is extremely hot.

Moscow in winter has a mean temperature of 18° F. below freezing-point, and in July one of 64.9° —about the same as Paris. Places in south Russia, which are on the same latitude as Paris and Vienna, have, in January, the same temperature as Stockholm, and in July that of Madrid. The winter is not only much severer than that of western Europe, it is more prolonged. The country is covered with snow for months. The difference in temperature is not caused by the latitude. The variations between north and south are less marked than in the countries of western Europe.

Effects of Latitude and Longitude

But the difference in temperature between east and west is sharper, and the farther eastwards you go, the greater the cold and the difference of temperature in the winter between the east and the west is greater than the difference of the temperature in the summer between the north and the south. The quality of the summer is determined by the latitude but that of the winter by the longitude.

To sum up, Russia is a huge, uniform plain, which can be divided into belts of varying vegetation and of gradually

varying soil. It is a continental country with a continental climate, divorced from the sea, and dependent upon a large river system: The climate is one of extremes: an intensely hot summer, a severe and long winter, a spring that lasts no longer than a fortnight and a brief and tumultuous autumn. These characteristics have had a profound influence on the history of Russia and the character of its inhabitants.

What does Russia look like? It is probably as well for the reader who has never been there to get rid of any pre-conceived notions which he may have derived on the subject from fiction, English and otherwise, and the stage. There is nothing fantastic about Russia, it is preeminently a realistic country.

Here is a description of a landscape; a snapshot of impressions taken one afternoon in a small provincial town in the centre of Russia:

Autumn in a Russian Town

"It was an autumn day in late October; there were no clouds in the sky, which was of a light, transparent, dazzling blue. The atmosphere was so clear that even the details in the distance were distinct and stood out as if in a stereoscopic view.

"We were standing on a wooden bridge which spanned a narrow, sluggish-brown river. The banks were of shelving sand. You reached the bridge by going down some wooden steps on one side and when you had crossed it you had again to mount wooden steps to reach the farther bank. Beyond the river and thirty yards from it was the town on the level: on either side of the river the country stretched out into the distance, flat, dark and brown, cut by a road. The town was a conglomeration of squat, two-storeyed houses, some of them built of bricks and whitewashed and some built of wood.

"To the right a large cathedral, the fourth biggest in Russia, towered over these squat houses. Five large whitewashed Corinthian pillars supported the pediment and the dome. The walls and

dome were whitewashed too. A little farther to the left of it there was another church with a white spire and a round cupola painted ultramarine blue. The church stood in an open space and then came a line of houses which formed the limit of the town. On the other side of the river there were a few straggling houses belonging to the poor ; these had only one storey and were built of logs placed horizontally, one on the top of the other, and were roofed with iron.

"At the roadside there was one larger house painted white with a tall chimney : this was a factory. Near it was a tall, wooden windmill ; one of its four fans was missing. Far away in the distance on the horizon of the plain, a bare, brown wood. As we leant over the bridge, we observed at the foot of the left bank of the river a raft, and on it a wooden hut with windows and a flat roof, and there a bevy of women in coloured prints were washing their linen. Five or six soldiers were looking on. There was not a sound in the air except the splash made by the washing.

Scene Like a Lantern Slide

"From the plain, along the dusty, rutty road, a line of carts crept along, one in front of the other, five of the foremost being without drivers, all of them laden with sacks ; alongside of the sixth came the owner, a bearded peasant, dressed in brown leather. Every now and then he influenced the march of the procession by shouting a word to the horses. Soon the line of carts crossed the bridge and turned into the town, the creaking died away in the distance, stillness fell upon the landscape once more and was so deep that the scene became almost unreal, like the slide of a magic lantern.

"The only spots of colour in this landscape were the blue cupola of the church, a blue and red shirt hanging up on an apple-tree to dry, and the kerchiefs of the women who were washing their linen in the river."

But of all the sights one can see in Russia, the winter is probably the most

striking, when the snow has definitely fallen, which happens generally after three attempts, and when no temporary thaw can dislodge it until the advent of spring. There is nothing monotonous about the Russian winter. It is long and severe, but infinitely various in aspect. The snow varies from day to day in its lights, and when, after a heavy snowfall, it freezes hard and the sun comes out, shining on the powdered branches and striking a hundred iridescent lights, the world assumes a fantastic, a strange fairy-tale appearance.

The Brief Russian Spring

The shortest of the Russian seasons is the spring, which is heralded by the melting of the snows and the flooding of the rivers. Here is a description of that brief but lovely phenomenon made on the spot :

"We passed a small river that up to now had been frozen, but the thaw had come and with it the floods of spring. The valley, as seen from the higher slopes of the woods, was a sheet of shining water. Beyond it, in the distance, was a line of dark brown woods. The water was grey with gleaming layers in it, reflecting the white clouds and the blue sky, and on it the bare trees seemed to float and rise like delicate ghosts, casting clearly defined brown reflections.

"The place had a look of magic and enchantment about it as if out of the elements of the winter, out of the snow and the ice and the leafless boughs, the spring had devised and evoked a silvery pageant to celebrate its resurrection."

How North and South Differ

The contrast between the north and the south of Russia is not so great as in other countries, but a difference and a contrast of course exist.

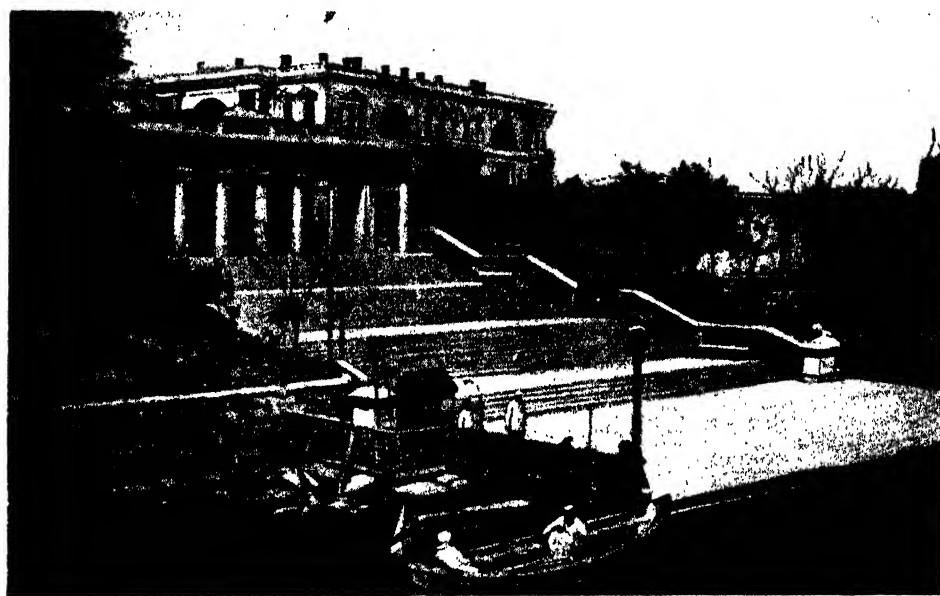
In the south the lie of the land is not very different ; the country is still a rolling plain with here and there a wood ; the main features are the same : churches, windmills and way-side chapels. The architecture of the

churches is the same. The difference lies in the villages and in the appearance of the houses. In Little Russia, that is to say, southern Russia, the villages, instead of being a shabby brown, are brighter and more cheerful. Small holdings were and, indeed, are still the rule : the peasant lives in a farm.

These little farms are painted pale green outside and are clean within as well as without. The walls indoors are painted red and blue, the furniture

mirror of the day, and so is the river, with its high green frame of trees. How luscious and how soft is the summer in Little Russia !

"It was just such a hot day in August, when the road, ten versts from the little town of Sorochinetz, was seething with people hurrying from all the farms, far and near, to the fair. With the break of day an endless chain of wagons laboured along, carrying salt and fish. Mountains of pots



E. N. A.

AT THE GRAFSKI LANDING-STAGE OF SEVASTOPOL,

By a sheltered bay running into the land for several miles lies Sevastopol, on the south-west coast of the Crimea. Since its almost complete destruction during the great siege of 1854-55, the town has been largely rebuilt, and its harbour, one of the best in Russia, affords accommodation for vessels of very large tonnage. The Grafski landing-place has a staircase and a columned portico

is neatly arranged and no poultry live in the living room. They are thatched with straw and surrounded by orchards and fruit-trees. Here is a description of a summer's day in Little Russia by Gogol :

"Like emeralds, topazes and amethysts, the diaphanous insects flutter in the many-coloured fruit gardens, which are shaded by stately sunflowers. Grey haystacks and golden sheaves of corn stand in rows along the field like hillocks on the immense expanse. Broad boughs bend under their load of cherries, plums, apples and pears. The sky is the transparent

wrapped in hay moved slowly on as if they were weary of being cut off from the sunshine. Only here and there some brightly painted soup-tureen or earthenware saucepan proudly emerged on the tilt of the high-heaped wagon, and attracted the eyes of lovers of finery ; many passers-by looked with envy on the tall potter, the owner of all these treasures, who with slow steps walked beside his goods."

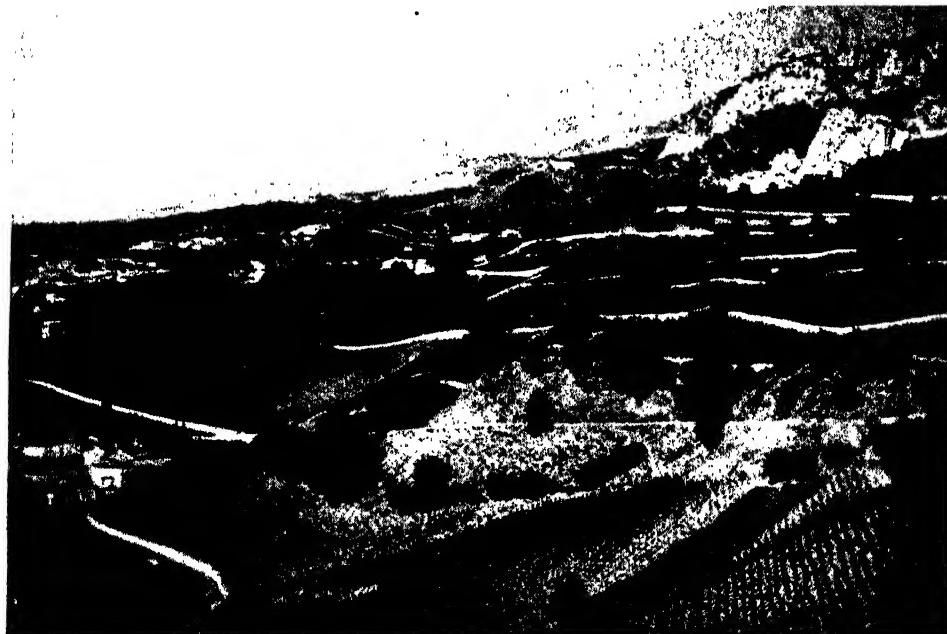
When one has described a landscape in the north of Russia and a landscape in the south, one has practically given a description of the whole country, and this shows how different Russia is from



Florence Farmborough

YALTA, FASHIONABLE SEA-BATHING RESORT OF THE CRIMEA

The southern coast of the Crimea is the Riviera of Russia. Here mountains and sea combine to present pictures of indescribable loveliness, and the fringe of luxuriant semi-tropical vegetation speaks of a Mediterranean climate. Yalta is beautifully situated on an amphitheatre at the foot of precipitous heights. In the background the Ayu-Dagh, or Bear Mountain, rises from the bay of Gourzouff.



Florence Farmborough

VINEYARDS WHICH SUPPLY THE DELICIOUS CRIMEAN WINES

The beautiful forests, vineyards, fruit-filled orchards and flower-filled gardens of the Crimea's southern coast vouch for the mild climate enjoyed between the high, abruptly-rising mountain-wall of the Yaila-Dagh and the Black Sea. Sheltered from the north winds the vineyards, spread over the slopes and in the valleys, produce the full-bodied wines so eagerly sought in the markets of Russia.



E. N. A.

BALA CLAVA'S HANDFUL OF HOUSES ON THE PICTURESQUE BAY

Balaclava lies on the Black Sea, eight miles south-east of Sevastopol. It was the base of the Allies in the Crimean War and holds a memorable place in history because of the heroic charge of the Light Brigade, October 25, 1854, immortalised by Tennyson in his famous poem. The small town of Balaclava is set delightfully at the base of high barren cliffs enclosing the quiet bay

**SPLENDOUR OF WILD NATURE IN THE CRIMEAN PENINSULA**

This wonderful view opens before the traveller at the Baidar Gate, or pass of Foros, situated some 29 miles by highroad east of Sevastopol at an altitude of 1,635 feet. From this point the road, fringed on one side by the vast expanse of sea and on the other by giant cliffs of Jurassic limestone, zigzags downwards steeply with sharp angles, passing a Greek Catholic Church erected in 1892

England, France or any Western country. It would be difficult to give a foreign reader in one or two vignettes the most characteristic sights of England or of France, but in Russia the uniformity is so great that if you describe one scene you are describing one thousand others. This is especially true with regard to the towns. With the exception of Petrograd, which was built on the model of the continental towns of the eighteenth century, nearly all the Russian towns have exactly the same appearance : that of an overgrown village, a village with a citadel at the core of it.

Such citadels are called "kremlins." Kremlin means a fortress. A kremlin is generally on the top of a hill and consists of a few buildings with a wall round them. Gradually the kremlin expanded, houses overflowed the walls, as it were, and collected outside them. In the case of Moscow, the process went on and on until a large city was formed up and down and on both banks of the river Moskva.

Wooden Houses and Fire Insurance

In the country there are no castles, hardly any stone buildings at all, with the exception of what was built in the eighteenth century after French models. In the villages, although there are brick houses, the majority of the buildings are made of wood. As they are thatched for the greater part with straw and the yards behind them and the streets in front of them are littered with straw, they take fire very easily. It used to be reckoned that the whole of the rural inhabited cottages in Russia were destroyed by fire at least once every seven years.

The fires seldom happened by accident ; they were more often the result of arson. A man who had a spite against an enemy set his house on fire. If the wind got up, the fire of course spread and perhaps five or six houses would be burnt. Sometimes the peasants set fire to their houses in order to get the insurance money.

The farther you go east, the more striking is the uniformity. Nijni Novgorod on the Volga is a smaller edition of Moscow. It has a kremlin, a river that overflows, and houses at the foot of the kremlin, which have spread so that the town occupies both sides of the Volga river.

The Famous Fair of Novgorod

The kremlin itself is on a steep hill and the town descends from it until it reaches the quays and the river and extends along them ; on the other side of the river there is a huge plain : it is there that the famous Fair of Nijni Novgorod takes place.

The Fair is a town in itself and, when it used to take place, the business and life of the town, including the hotels, banks, baths, shops, exchange, restaurants, would be transferred thither. The shops are one-storeyed and occupy square blocks which they intersect in parallel lines. They are of every description and quality. Tea and silks come from China, gems and, most important of all, furs from the Urals.

Irkutsk, the capital of Siberia, again is exactly like any other Russian town to look at. It is only when you get definitely south-east, to Astrakhan on the shores of the Caspian, that you are faced with a change of aspect in city ; Astrakhan is semi-Oriental.

The most striking feature of Russian landscape, just as it is the most important fact in Russian life, is the immense, limitless fields of corn, wheat, rye or buckwheat, which extend from the centre to the south of Russia. Here there are no hedges, no divisions, no limitations.

Crossing a Golden Sea

Every now and then, you may see the outline of a wood in the distance, sometimes you may pass the edge of a stretch of water where there are oak, aspen and birch trees, but in driving through the country, say in July, to the right and to the left of you there will be a golden sea of corn stretching as

far as the eye can carry. Later on, after the harvest, this will be bare stubble and in the autumn the black plains will be a light emerald green with the growing wheat which is sown after the harvest in August or September.

Windmills and churches, with their spires and cupolas which are painted in bright colours red, green, sometimes ultramarine and sometimes gilded, are, as I have said, the only features that relieve the monotony of the landscape; but on the side of the road you will often pass a post about four feet high which stands supporting two bits of wood forming a triangle: this is a holy image; or you will see larger ones, taller than a man, on the top of which is a little shrine, an oblong pointed cupboard which holds the holy ikon. These wayside shrines are dignified by the name of chapels.

During the last three hundred years Russia has gone through many and various vicissitudes. The Tartar invasion at the beginning of the thirteenth century meant a set-back to Russian civilization of three hundred years. In 1380 the whole of northern Russia under the predominance of Moscow had once more become a kingdom and, under the command of the prince of Moscow, Dimitri Ivanovitch, the Russians fought the Tartars

on the banks of the Don and won their first victory over them.

In 1430 Moscow was no longer a small Russian province surrounded by other provinces, but a kingdom surrounded by other Slav kingdoms and strong enough to throw off the Tartar yoke. After a struggle which lasted for centuries, Moscow prevailed over the neighbouring Slav kingdoms, Poland, Lithuania, Little Russia and other Slav nationalities and became the country of Great Russia and continued to expand until, after many troubles and periods of anarchy, of wars and disasters, Peter the Great founded St. Petersburg—later Petrograd and still later Leningrad—and opened Russia to Europe and the influence of the west.

Later on came the emancipation of the serfs and a revolutionary movement which reached its culmination at the end of the Great War, with the Bolsheviks and the Soviet regime.

But throughout all these vicissitudes and changes, the Russian peasant has remained unchanged both in himself, in his way of living, in his manners, morals, religions and customs, so that a Russian village is to-day not very different from what it was in the days of Peter the Great or Ivan the Terrible, who was a contemporary of Queen Elizabeth.

RUSSIA: GEOGRAPHICAL SUMMARY

Natural Divisions. Eastern end of the Great European Plain, with the Valdai hills as the boss of the shield, and the main rivers diverging from it. Rivers are almost without gradient and are practically canals, except during the flood season, when they submerge large areas. (Cf. the Hungarian Alföld.)

Climate. Continental in its extremes and severity. Temperature declines in summer with distance from the Equator, in winter with nearness to the Siberian pole of maximum cold. (Cf. Arctic Lands.) Summer rains, with a small annual total. Really only two seasons.

Vegetation. From north to south tundra (v. Arctic Lands), coniferous forest, deciduous forest, grass-land, scrub-land. (Cf. Canada.) Black earth region, a bed of fertile soil, an accumulation

of wind-blown dust. (Cf. the loess region in China.)

Products. Primarily, timber for housing, grain, fish and flesh for the food of a self-contained community. Secondly, surplusage of wheat, timber, turpentine, for export, along with furs, feathers, luxuries in fish and precious metals (platinum). Some manufactures in factories served by workers who come in from the fields during the winter.

Communications. Rivers and roads (tracks). Railways radiate from Moscow; trans-Siberian, trans-Caspian.

Outlook. Limited in every direction by the monotony of their environment, the Russian peasants, the people par excellence, await the awakening which only time, education and experience are able to provoke.

SAHARA

The Great Desert Land of Africa

by Robert Machray

Author and Journalist

LONG a region of mystery, if not of romance, the Sahara, though some parts of its vast extent remain still unexplored, defines itself nowadays as a unit more literally than does any other great area of the globe.

Its very name, which is the Europeanised form of the Arab word Sahira, meaning desert, indicates what is by far its predominant characteristic, and incidentally suggests its distinctive climate. The first of a series of waste-lands which reaches, with some breaks, from the Atlantic, across Africa and Asia, to the Pacific, it is much the largest continuous desert in the world.

With the exception of a number of fertile spots, called oases, the Sahara consists of apparently endless tracts of ochreous or red rock plateaux, rising here and there into ranges of hills and even lofty mountains, or of plains of dazzling, soft, white sand, often in motion under the whip of the wind, and marked in several districts, particularly in the Libyan Desert on the east, by long chains of dunes, the very contours of which shift and change fantastically with every passing storm.

Africa's Vast Tableland

It is not, however, a unit politically. France holds about three-fifths of it, and the remainder is Spanish, Italian and British. But whatever flag it flies the Sahara is, speaking generally, one hard and inhospitable land, almost incredibly dreary, despite its being sun-drenched during most of the year. The tribes who live in it are like it, as they need to be, else would they perish utterly.

Perhaps best described as a table-land, the greater portion of which is less than 1,000 feet above the sea, and

having only a few small depressions, below sea-level, the Sahara is that huge oblong block of North Africa that is bounded on the north by the Barbary States, Tripoli and Egypt; on the south by the Sudan; on the west by the Atlantic; and on the east by Egypt.

It is often taken to include the whole gigantic area lying between the Atlantic and the Red Sea, the actual Nile lands being regarded as oases. And it is certainly the case that only a very short distance east of the Nile the country, especially that section of it known as the Nubian Desert, is of the Sahara type.

The World's Greatest Desert

If all this territory, less the Nile lands, is added to what may be termed the Sahara proper, the area of the Sahara reaches the stupendous figure, approximately, of 3,500,000 square miles.

In addition to covering Spanish Rio de Oro, opposite the Canary Islands, and French Mauritania as its Atlantic borderlands, the Sahara really extends over the southern parts of the Barbary States and Tripoli, as they are genuine desert: In southern Algeria and Tunisia French expansion, seeking routes to Timbuktu and French West Africa, has led to the improvement of natural oases and the creation of artificial ones by sinking artesian wells. To some extent the engineer is conquering there.

Nothing of the kind can be said of the Libyan Desert, south of Tripoli; in the course of time the Italians may do something with it, but for many years past the water has disappeared from the oases there, or has been greatly reduced, villages have shrunken to hovels of a few huts or have ceased to exist, while the population has dwindled, or died out,



NORTH AFRICA'S BARREN PLATEAU OF ROCK AND SAND FROM THE ATLANTIC TO THE NILE

Not in the Libyan Desert alone, but throughout the whole Sahara, as a rule, the problem is water. The oases occupy so small a proportionate part of the entire area, that it is no exaggeration to say that the Sahara is a waterless land. Here arises that most interesting question : What was this region, now called the Sahara, before it became desert ?

For it was not always desert, nor within historical times was it nearly so vast, so complete a desert as it now is, for the Romans, it is well known, had their military stations far into the interior. Besides, there are evidences in ancient dry watercourses, some of considerable width and length, that it once possessed numerous rivers and streams. And there is no doubt that at some still more distant period an extensive portion of it was sea : a salt sea, connected with or forming part of the Atlantic, not a fresh-water lake.

The Riddle of the Sands

That a sea really existed in a portion of the Sahara is proved by the enormous deposits of salt and the presence of fossils of marine creatures. But there is no proof that the whole of it was once covered by the sea. Formerly there was a belief that what is now termed the Sahara was nothing more or less than the bed of a sea, or rather ocean, which had been thrown up by some tremendous convulsion of nature, but this belief, like many another, no longer obtains, as the known facts discredit it.

In this instance, however, it is the unknown facts that are the most important, and the secret of the origin of the Sahara has not yet been penetrated. Science has still to say what the Sahara was and how it came to be what it is.

This much can be explained by saying that what has long been and is still going on in the Sahara is a prodigious process of erosion, of the wearing away or the stripping of its rock surfaces, owing to the dynamic energy of certain elements in that area, the chief being the burning solar heat, followed at night by the cold set up by radiation.

Nowhere else is erosion seen on so colossal a scale ; it has been continuous for very many centuries, and is probably constantly, if slowly, increasing.

To put the matter concretely, what happens is that the outer layers of rock, which are destitute of the protective covering of vegetation, are expanded by day and contracted by night, with the result that they split up into large and small pieces, which finally will be pounded and ground down into sand by sun and wind. Large portions of the Sahara have been converted into stony wastes, and no scenes in all the world are more forbidding and desolate.

Snow in the Sahara

In its present stage the Sahara shows far more rock than sand. The first travellers who wrote of it gave a general impression that it was all sand—a “ sea of sand.” Parts of it are all sand, as in the Libyan Desert, in the portion west of the Tibesti plateau, and in the western Sahara south of the Atlas.

Barring the sand dunes, which in places may be 1,000 feet high, the surface in these parts is more or less regular, laid out, as it were, in extensive plains shining golden or silvern in the sun. But much the larger part of the Sahara—about two-thirds of it at least—has a varied surface with plenty of “ relief.” Indeed, there are mountains high enough to have snow well below their summits for several months each year. To the popular mind snow in the Sahara may appear incredible, but it is none the less true.

Desert Rival of the Alps

These snowy peaks are found almost in the centre of the Sahara, in a high mountainous country called the Ahaggar or Hoggar plateau, whose area equals, it is reported, that of the Alps, but the summits of which are much lower, the loftiest being about 8,000 feet. In the south-east, snow also lies for a time each year on the peaks of the Tibesti plateau, the ranges of the massif having an average altitude of 7,000 feet, and at



ROCKY HILLS AND BOULDER-STREWN GORGE IN THE SAHARA.

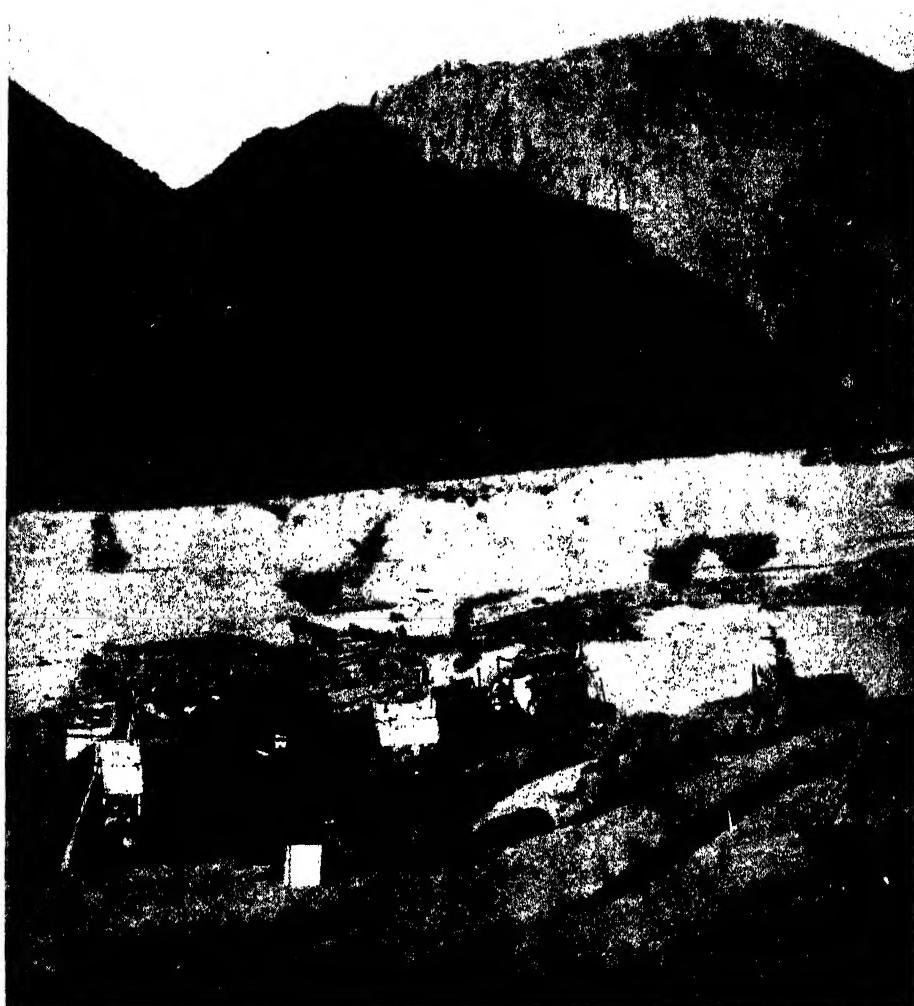
Sand, endless stretches of golden sand, is the almost universal conception of the Sahara ; but this is very far from being the case. A considerable area of the desert is entirely composed of enormous wastes of rock broken by ranges of mountains upon the loftiest peaks of which lies snow. It is hard to say whether the stony or sandy regions are the more dreaded by the traveller

least one summit, that of Mount Tusidde, an extinct volcano, of about 9,000 feet.

North of the Ahaggar are two ranges, the more considerable of which, the Tasili Asjer, is roughly 300 miles in length, and has an elevation in parts of 4,000 to 5,000 feet ; it is in the north-eastern Sahara, towards Tripoli. In the south, in the direction of Nigeria, rise the Air or Baghsen Mountains, of volcanic origin, as are most, if not all, of the ranges of the Sahara. Besides

the foregoing, smaller plateaux and even isolated hills are interspersed among some of the sandy wastes.

Apart from the great ranges, there are vast stretches of rough, uneven desert strewn with blocks and bits of granite and other rocks, or with pebbles of all sizes that show traces unmistakably of the action of water in the far-off past. The general name for the rocky desert is the Hammada. In the sandy wastes the most



FRENCH EXPEDITION ENCAMPED BENEATH THE BLUE MOUNTAINS

In the winter of 1922-3 an expedition, equipped with specially constructed cars, crossed the Sahara to Timbuktu and surveyed the desert with a view to establishing a passenger service of motor-cars. The Blue Mountains lie not far from the mountainous tract called the Ahaggar plateau, which is situated in the middle of the Sahara and contains peaks rising to a height of nearly 8,000 feet.

considerable dunes are the Igidi—the Berber word for dunes—which reach from the Atlantic, near Cape Blanco, to within a few miles of the Gulf of Gabes, on the Mediterranean. This belt of sandhills is well over 1,000 miles in length, and in parts it is more than 200 miles in breadth.

The Libyan Desert is the most terrible part of the Sahara; it is full of dunes and soft shifting sands, and has not much of the Hammada. It has

not been thoroughly explored, and has only one route, and that a bad one, which runs through the Kufra oases north and south. It is estimated to have an area of about 500,000 square miles and is almost absolutely sterile.

All the great ranges of the Sahara are broken irregularly by valleys through which once flowed rivers and by enormous ravines that once were watercourses, but now seldom or for long hold any water: though the higher



E. N. A.

WALLED TOWN OF GUERARA CLOSE TO THE NORTHERN OUTPOSTS OF THE DESERT

Guerara lies in the province of Ghardaïa within the Algerian Sahara and is a caravan centre. The town is partitioned off into small sections by the high mud walls which afford a certain amount of privacy to each household. The desert behind the town stretches away in a series of ridges as far as the eye can see, and in the northward chain of oases south of the true province of Algeria, which adds to the importance of the town

ranges of the Ahaggar, Tibesti and Air plateaux do get some occasional rains. In the north a number of short rivers and streams flow from the Atlas to irrigate and fertilise the oases at its base and make them into small towns, such as Figig, which is in Morocco but is genuinely Saharan, even if connected by rail, like Biskra and Touggourt much farther east, with the Algeria-Tunis railway system. In the south the desert gradually passes into the Niger country.

The lack of water, combined with the intense heat that prevails most of the year, and the consequent excessive evaporation, makes nearly the whole of this huge desert region exceptionally trying for ordinary humanity. In summer, which lasts about eight months, most of the Sahara has a temperature of over 90° F., and is the hottest of all the lands of Africa. The daily variation is from 40° to 60° F.

Moving Dunes of Death

The desert winds are all dry winds, and when strong cause terrible sand-storms, which often begin with little warning. Usually enough a dense dark yellowish cloud appears suddenly on the horizon. This cloud is sand, in countless particles, which is driven on by an intensely hot wind, like a blast of hot air from a furnace. The sand grows into a mass—a sort of sand-bank, hurling forward at tremendous speed and overpowering everything with which it comes into contact.

True, the Sahara has features that offer some compensations. Even in the height of its torrid summer one can always be sure of sleep in the cool of its nights. The air is of extraordinary purity and limpidity, when the wind is at rest or blowing lightly, as it generally is. What clearness of view is possible in that brilliance of light! What indescribable grandeurs and glories of dawns and sunsets!

The soil is, strange though it may seem, potentially very fertile. Give it water, as the French engineers have done and are doing south of the Atlas,

and the desert grows green and blossoms like the rose. But the work of these engineers, while important in itself, is relatively insignificant. Where there is vegetation in the desert areas away from the borers of wells it consists of a scrub of dwarf thorny plants, such as the gum acacia, which are adapted to resist a long drought, or of very coarse dry grasses, that afford scanty nourishment for animals.

Precious Fruit of the Oases

It is a curious fact that nearly everything that grows in the desert region has spikes or thorns. Of course, in and about the oases the situation is very different. There the date palm flourishes, and supplies virtually all the desert tribes with what is almost the only food they have. It is the date which makes existence possible in the Sahara. In the oases many other things are produced—oranges, figs, peaches, grapes, besides various grains, including rice and durra.

Naturally it is the oases that have a settled, if scanty, population; but the desert itself has its tribes, some nomadic, others in permanent occupation of definite localities, such as the Ahaggar plateau, that have rains now and again and a small amount of vegetation. The oases form the lines of travel and the trade routes, and are found along lines of depression where water rises to the low-lying surface.

Railway Superseding the Caravan

In the north the French railways now reach to beyond Figig on the Moroccan frontier and beyond Biskra to Touggourt, and in a measure they are doing away with the old northern caravan route which, starting in Morocco, went on to Cairo. This route lies at the base of the Atlas and in the depression between the Atlas and the tableland to the south-east, and includes the oases of Ghadames, Ourgla and Twat—the last named, especially that part of the district called In Salah, being perhaps the most important of the



E. N. A.

CARAVAN DEFILING THROUGH THE HILLS OF THE TIBESTI

The Tibesti is a mountainous region of the Sahara, which lies about 360 miles north-east of Lake Chad. A caravan route from Tripoli to Lake Chad skirts the northern edge of the plateau. There are occasional heavy rainfalls in this region, which is peopled by the nomad Tebus, or "rock-people," who are physically a fine race and bear a resemblance to the veiled Tuaregs



E. N. A.

APPROACH TO THE OASIS OF TABELKOZA IN THE FRENCH SAHARA

The bulk of northern Africa's vast desert is controlled by the French, who have brought many sterile districts under cultivation and dug numerous wells; these green havens standing for shade, water and rest to the wayworn and weary caravans that toil across the burning sands. Tabekkoza is one of the fertile oases which fix the course of the great routes across the arid face of the Sahara



E. N. A.

TIMBUKTU, THE ONCE MYSTERIOUS CITY OF THE SAHARA

Timbuktu, lying close to the Niger, was for centuries the subject of extravagant legends, and the veil was only finally lifted by the French in 1894. Ruins outside the present town show that it has decreased in size as well as in commercial importance. The principal trade now is done by caravans fetching salt from the interior. A railway from Algeria to Timbuktu is under contemplation



E. N. A.

EXPEDITION UPON THE DESERT BETWEEN IN SALAH AND IGOSTEN

Between the small towns of Igosten and In Salah the monotony of the Sahara is broken by scattered rocks, and the sand is firm enough not to hinder the progress of laden motor-cars. The two towns are in the region of the Twat oases where lies one of the most important centres of population, and where ancient trade routes from Morocco, Timbuktu and Tripoli all converge

oases of the Sahara. In the Libyan Desert are the famous oases of Siwa, the scene of the defeat of the Senussi by the British in the Great War, and of Kufra, the headquarters of that once-powerful organization.

From the Mediterranean to the Sudan trade routes follow other lines of oases. From Tafilet, a great oasis in Southern Morocco, a route runs via Twat to Timbuktu. From Touggourt is another route which, skirting the Ahaggar, also reaches Timbuktu. Along this route the French have established posts which to some extent are served by motor-cars, and if a trans-Saharan railway is ever built it will probably take this line.

Routes from Tripoli and Fez concentrate on the Twat oases and thence also proceed to Timbuktu. As the terminus of these trade routes it will be seen that Timbuktu suggests itself as being a great commercial centre, which indeed it is, though the development of the railway built by the French through Senegal has rather lessened its importance.

From Tripoli there are routes passing through the Murzuk oases in Fezzan, at the northern side of the Tibesti plateau, to Lake Chad or, by way of Agades, on the edge of the Air plateau, to the Niger. Still another eastern route begins at Benghazi, in Barka, goes on through Jalo to the Kufra oases and then to Erdebeh, Darfur and the Anglo-Egyptian Sudan.

This route may have its start still farther east, at Sollum, strike down to the Siwa oases, and then through

Jarabub to Jalo, with the rest of the route unchanged. The Libyan Desert remains a horror; in the French parts of the Sahara the routes on the whole have been greatly improved, because the tribes have been subjugated and the wells looked after.

No precise estimate can be given of the population of the Sahara, but the figure is probably around 2,000,000. In the west the tribes are Moorish, and in the centre they are known as Tuaregs; both are of Berber origin. Of all the creatures of the desert the Tuaregs, robber nomads, were the most formidable, but they have been tamed by the French.

The veils they wear protect them from the sand and also from thirst. Another veiled people, probably of entirely different origin, live in the east—in the Tibesti country—and they are called Tebbus or Tibbus. A remarkable fact about nearly all the desert menfolk is that they are handsome, and many of them are extremely good-looking; the same, however, cannot be said of their women. There is a certain amount of trade in dates, grain, salt, borne on the backs of their camels.

The desert, outside the oases, yields them little food. In truth their lot is, as a rule, "bitter hard." Yet they are not unhappy or discontented. In dignity, in grace of bearing, in sheer aristocratic poise none surpasses these sons of the desert—this is the impression that abides, thrown sharply against that appalling desert background.

SAHARA: GEOGRAPHICAL SUMMARY

Natural Division. Part of the low plateau of North Africa; a rocky waste carved by aerial erosion or a sandy waste filled with the products, sharp-edged sand grains, of erosion. Sometimes the sand shifts, and wind breaks are needed to protect the oases; sometimes wheel tracks remain sharp, clear-cut and undisturbed for many months.

Climate. Hot; yet continental in the great diurnal variation due to absence of cloud. Snow on highest peaks. Occasional rains on the heights, otherwise rainless.

Vegetation. Spiky or thorny desert plants. Wherever water occurs or is provided

plants thrive. Oases are cultivated areas yielding dates, rice, durra, oranges.

Communications. Railways reach the verge. Camel caravan routes are defined. Motors have crossed from north to south. A trans-Saharan railway across the French areas is projected.

Outlook. Some day the radiant energy of the sun may be directly used to provide motive power for machinery; preliminary attempts at sun machines have been made. Then the cloudless Sahara can be exploited. Until then the desert limits man to small numbers, small efforts, and small results for the rest of the world.

SAMOA

Pacific Isles of Teeming Growth

by Sir Basil Thomson, K.C.B.

Author of "The Discovery of the Solomon Islands," etc.

SAMOA, sometimes called the Navigators Islands, is an archipelago comprising fourteen islands which lie in a curved chain nearly east and west between $13^{\circ} 30'$ and $14^{\circ} 30'$ S. Lat. and 168° and 173° W. Long.

They are 1,600 miles from Auckland, 2,410 miles from Sydney and 4,200 miles from San Francisco. All are of volcanic origin, with several extinct or quiescent craters, varying in height from 2,000 feet in Upolu to 4,000 feet in Manua.

The islands of Savaii, with an area of 660 square miles and a population of 13,200, of Manono, Apolima, Upolu, 340 square miles with a population of 18,400, of Fanuatapu, Manua, Nuutele and Nuulua are governed by New Zealand under a mandate from the League of Nations. Tutuila, with an area of 77 square miles and a population of 3,800, Anua, Ofu, Olosenga, Tagi and Rose Island belong to the United States of America.

The total population of the islands administered by the United States was 8,056 in 1920. Rose Island alone is a coral island, 70 miles east of its nearest neighbour and uninhabited. Geographically, therefore, it scarcely belongs to the Samoa group.

Seismic Disturbance of Reefs

Though there are now no active craters, the natives have preserved tradition of eruptions in Upolu as late as the seventeenth and eighteenth centuries. Earthquakes are not infrequent and some of them are severe. In 1866 a submarine volcano caused disturbance near Olosenga. The larger islands are long and narrow, with a mountainous backbone scored with valleys and gorges.

Water is abundant and the volcanic soil is remarkably fertile.

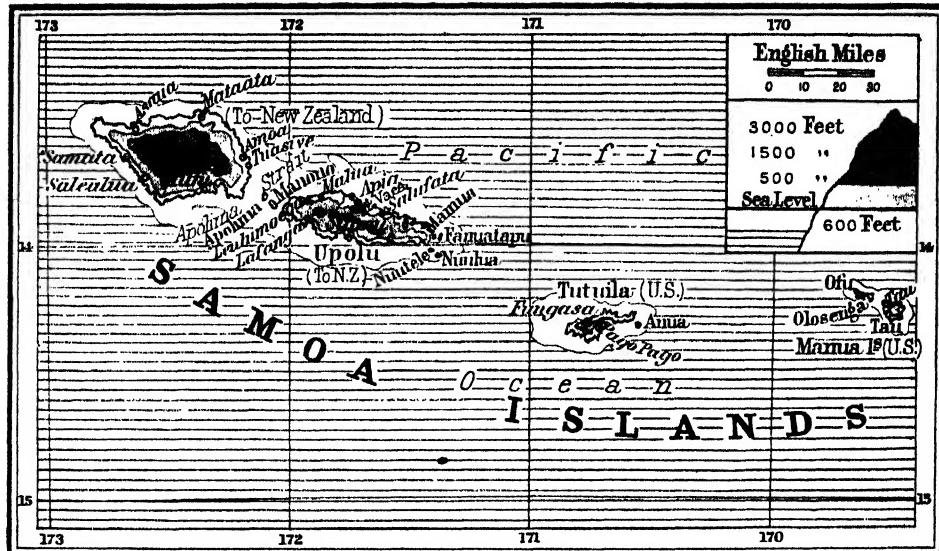
Probably it is due to recent volcanic disturbance that the reef system is irregular and patchy, instead of forming a solid barrier round each island. The harbour of Pago Pago in the American portion owes its safety in all winds to being a rift in a mass of upheaved coral into which the sea has penetrated, forming an entrance deep enough for the passage of vessels of large size.

In the Track of the Cyclone

Samoa lies within the area of the south-east trade wind which blows steadily from April to September. In October it fails and rain sets in, culminating in December and January, the wettest months. Out of the total annual rainfall of 136.41 nearly 30 inches fall in January. The north-west monsoon does not reach Samoa, but from January to March west winds are common.

Unfortunately, the islands lie in the track of cyclones which blow with terrific force, generally in January or March, raising tidal waves and doing immense damage to the crops. The hurricane of March 16, 1889, which wrecked American and German war vessels lying at anchor in Apia harbour, is still remembered. Eleven years later I saw their hulls still lying on the foreshore. With so high a rainfall the climate is damp, but the heat is tempered by the prevailing wind and the temperature seldom rises above 80° F.; in July, the coolest month, it falls to 75° F.

The scenery and vegetation of the forest are of extraordinary beauty. The trees are large and of great variety



SAMOA, A FERTILE ARCHIPELAGO OF THE SOUTHERN SEAS

and are draped with creepers and parasites. Near the streams tree ferns with slender black stems rear their feathery crowns, and ferns and reeds cover every square inch of ground. When a plantation is abandoned the forest begins at once to encroach upon it, and in a very few years all traces of human industry have disappeared.

The indigenous mammals are limited to a native rat and several species of bat, among which is the fruit-eating flying-fox which devastates the fruit-plantations and defies all attempts to exterminate it. Finding that it is too wary and intelligent to fall a victim to the gun, the government considered the use of mustard gas. There are four species of snake, all harmless, and many of the birds found in the neighbouring groups of islands.

One of the most interesting is a ground pigeon with a red, green, black and chestnut plumage, which links the extinct dodo with the Treroninae in Africa. It is difficult to understand how a bird unable to fly across the sea can have reached islands of recent geological formation. The domestic animals have all been introduced: the pig, dog and domestic fowl in ancient times by the natives; the cat by

passing ships. Horses and cattle have been introduced into the islands comparatively recently.

Samoa would be a paradise for the planter were it not for the uncertainty about cyclones, tidal waves and pests. During the German administration from 1900 to 1914 government plantations were established, and there were then but twelve privately owned plantations in the group.

The staple food of the natives is derived from the coconut, the bread-fruit and the banana, of which there are many varieties. Europeans have introduced the cacao and the pineapple, and have greatly improved the cultivation of the coconut and the banana. But practically every tropical plant that thrives in a wet country grows well, and even European garden produce seems to thrive when properly tended.

Next to the flying-fox the worst of the pests is the rhinoceros beetle, which ravages the coconut-trees. The government has taken the suppression of this pest energetically in hand. The natives are encouraged by ordinance and inducement to search for the eggs and larvae as well as the mature insect; on two occasions admission to cinema shows was paid in beetles.

Experience has shown that in Upolu, where there is ceaseless vigilance, the beetles can be kept down, though not exterminated, but that in Savaii, where the authorities are not continually behind the natives, the pest increases. Its breeding places are the heaps of refuse from the cacao and the coconut, and this cannot be burnt on account of the humidity. There is a proposal to experiment with the scoliid wasp, but the obvious danger is that the remedy may prove in the long run to be a greater evil than the disease.

The other pests are bark disease in the cacao and the lantana weed. Samoa has suffered so much from introduced disease that all plants and fruit landed from abroad are fumigated, and the importation of plants from Fiji has been strictly prohibited.

Besides the pests, the planter suffers from a chronic shortage of labour. The

Samoan is a typical Polynesian, urbane, well-mannered and constitutionally indolent. He has never been spurred to exertion except in war, or when he is in personal danger on the sea, and he has never shown any disposition to acquire wealth by industry. If he did it would be taken from him by other members of his tribe by a polite form of borrowing, which he would find it impossible to refuse without losing all his friends.

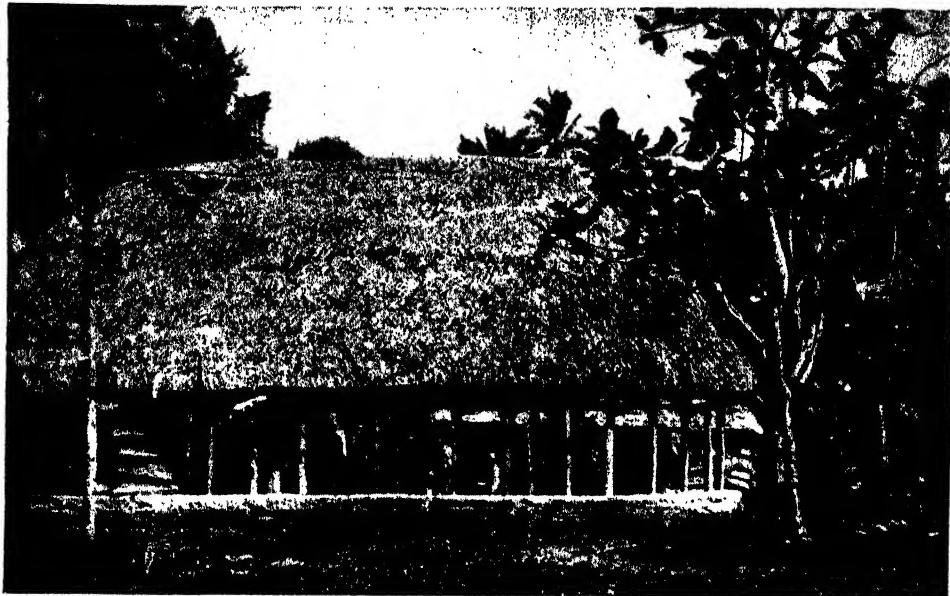
He has more than enough to do in providing food for his family from his own plantation. Consequently he will never work continuously for a European planter. Yet the Samoans represent 89 per cent. of the total population of 37,157. To meet the difficulty over 1,200 Chinese have been imported at a very high cost, and they, together with some 460 Melanesians from the New Hebrides and Solomon Islands, are the only plantation labourers available. The



New Zealand Government

HUSKING COCONUTS AT A COPRA FACTORY IN SAMOA

Samoa was formerly a German possession and the most prosperous that country had in the Pacific. Copra is the principal export though cacao is now being widely cultivated by white planters; Robert Louis Stevenson being one of the first successful growers. The labour problem is a great handicap to agriculture throughout the islands as the natives are physically incapable of regular work.



John Bushby

HUTS IN A NATIVE VILLAGE ON THE ISLAND OF UPOLU

Town-planning is still in the early stages of infancy in Samoa. The houses are erected utterly regardless of any regularity, being scattered about according to the whim of the owner. The huts are thatched with palm leaves, the roofs being supported by poles sunk into a low mud wall. Finely woven grass mats, capable of being rolled up, are hung in the gap between the roof and the top of the wall



The Reverend Canon Daleson

HOUSES OF A SAMOAN VILLAGE AMID THE PALMS NEAR APIA

Apia, the capital and chief port of the group, is situated on the northern coast of Upolu. The native population in the Navigators Islands, as the Samoan group is sometimes termed, is fairly dense and slowly increasing. The majority of the villages have been built along the coast, while the interior is but sparsely inhabited. Upolu is administered by New Zealand under a mandate granted in 1920



John Bushby

PALMS GROWING ALONG THE LOW GREEN SHORE ABOUT APIA

Nearly the whole of the coast of Upolu is protected by coral reefs except on the north-east. There are few entrances fit for large vessels and the navigation of these is exceedingly intricate. Salufata harbour, also on the north coast, affords better protection than Apia, but is smaller than the latter, which is open to the north and where a naval disaster occurred during a hurricane in 1880.

climate is too hot and moist for Europeans to perform agricultural or manual labour except of the very lightest kind.

The Samoans are expert fishermen and boatmen. They make trustworthy policemen, and a few of them have become fair carpenters. They are an intelligent people, and they work fairly well at an industry that interests them. While there are no manufactures, the natives produce bark, cloth fans and baskets of pretty and original design, and they find a ready market for them.

Effects of a Tidal Wave

The civil servants, drawn exclusively from New Zealand, the missionaries, the medical men and the planters make up the greater part of the European population, which numbers only 2,000, including both sexes, in British Samoa : in the American islands the total is even smaller.

The main internal communications are by sea, but in both the British and American islands considerable progress has been made with roadmaking and bridge-building. The work is often heart-breaking, for a deluge of rain or a tidal wave may sweep away in a few hours many months' labour. There is a telephone exchange in Apia, and a wireless station with a range sufficient to communicate with New Zealand, the neighbouring groups and ships at sea, and even to hear music played in Honolulu, 2,223 miles distant. The American naval wireless station at Pago Pago, besides its routine communications with Honolulu and the U.S.A., is open to ordinary commercial traffic.

Samoa's Trade Statistics

The total value of imports in the British portion in 1922-3 was £282,939, of which 37 per cent. came from Australia, 29 per cent. from New Zealand and 22½ per cent. from the United States. The exports were of the value of £365,310, principally copra, of which 37 per cent. went to Denmark, 23 per cent. to the United Kingdom

and 23 per cent. to Germany. The American islands export little besides copra. They are administered by a commandant-governor with three native deputies, each of whom is in charge of a political division.

The Samoan village is not a compact collection of houses, but a straggling line of thatched or weatherboard cottages under the shade of palms or breadfruit-trees. Pigs and fowls roam about it, and horses are tethered wherever there is grazing. Beyond requiring house-holders to sweep up refuse about their houses the native elected mayor, who is responsible to the administrator for good order, does not enforce sanitation, but the natives are naturally clean and the heavy rainfall tends to wash away refuse and impurities.

The only settlement in the British islands that can be called a town is Apia, where the houses straggle along the beach and up into the hills behind. Here there is a water supply and a telephone exchange, and the condition of the town has been greatly improved by the total prohibition of liquor and the heavy penalties exacted from illicit distillers. The British administration would be self-supporting but for the expenditure on education and medical services which are defrayed by an annual grant from New Zealand.

Diseases that Prey on the Native

There are government hospitals at Apia, the capital and port of entry, and at Tuasivi in Savaii. While the health of the Europeans is on the whole good, the natives are infected with hookworm, yaws and elephantiasis. It is estimated that 90 per cent. harbour hookworms and 25 per cent. the filaria of elephantiasis. The Rockefeller Foundation is carrying out special investigations into the causes and cure of these tropical diseases.

The Samoans are also peculiarly vulnerable to introduced diseases. The influenza epidemic of November, 1918, swept away 2,000, including many of the older chiefs, and caused some unrest,



E. N. A.

WATERFALL NEAR APIA FORMING A GOOD CHUTE FOR BATHERS

Close to Apia a small stream falls over a smooth rock into a deep pool; the fall is a favourite place for bathers who like a little novelty and excitement. There are no rivers of any great size in Upolu but many small streams; they never dry up as rain falls in every month, though the wettest period is between November and April when devastating cyclones often occur



London Missionary Society

COAST

BOATS IN THE HARBOUR AT MALUA, A LITTLE SETTLEMENT ON THE NORTH COAST

Malua is on Upolu about 10 miles west of Apia and a missionary station was founded there in 1844. The number of boats lying at anchor in the small bay may convey the impression that Malua is a town of some importance; this is not so as it is only on the occasion of some festivity that so many craft are to be seen and Apia is the only place which can be designated a town. Coconut palms, breadfruit and banana-trees provide the food of the Samoans and are chiefly cultivated by them. The plentiful rainfall and fertile soil have led to the introduction of rubber and coffee, the latter for local consumption.

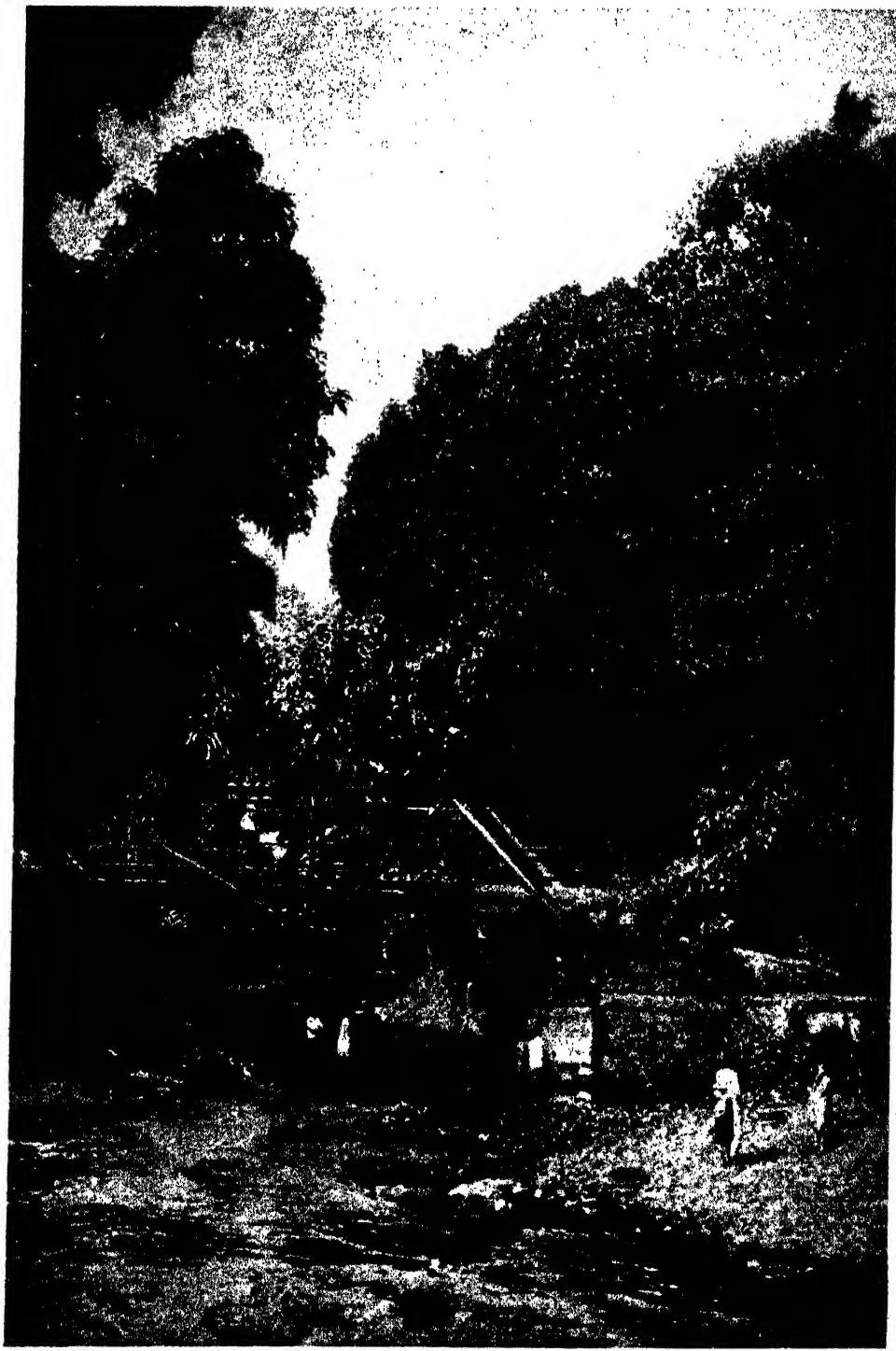


E. N. A

NATIVE VILLAGE ON UPOLU BY THE BANK OF A NARROW RIVER AT LAFANGA

Lafanga, situated on the south coast of Upolu, stands on Lafanga Bay at the western extremity of the island. It is connected with the north coast by a bridle-road which crosses the island to Leulumoega. Few of the rivers are of any use as means of communication, being navigable, as a rule, for only a short distance from their mouths. The reason for the absence of serviceable water-courses is the formation of Upolu, which is long and narrow with a central backbone of mountains in

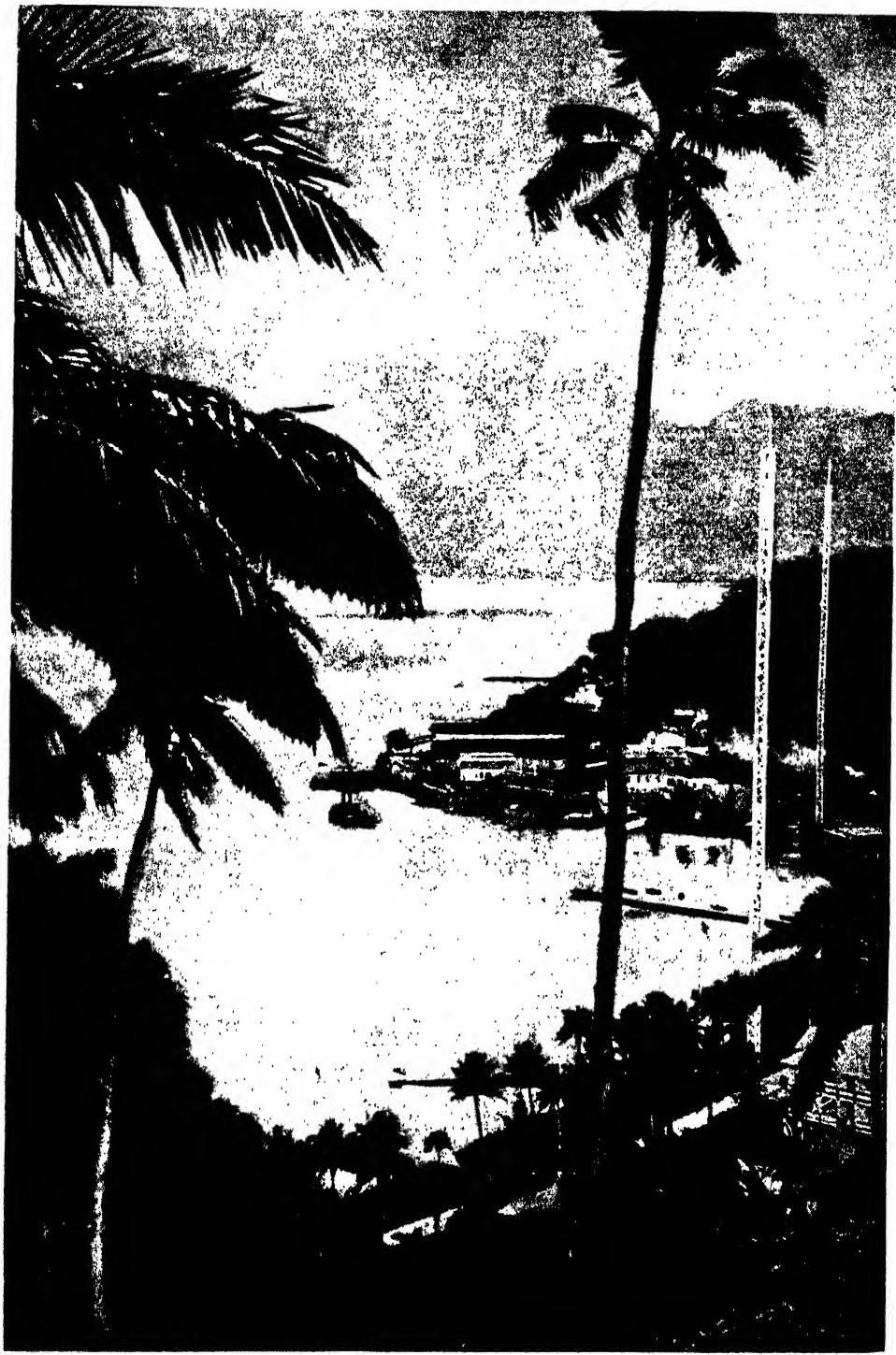
3,000 feet



New Zealand Government

MANGO-TREES BESIDE A BRIDGE IN THE ISLAND OF UPOLU

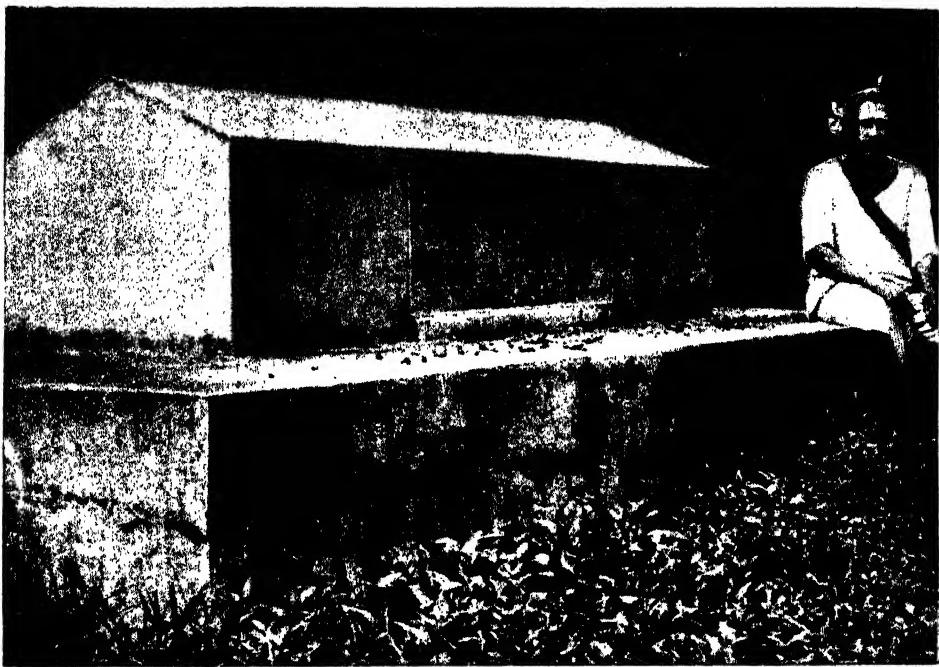
Road-construction is rendered very expensive and tedious owing to the bridges that have to be thrown across the many streams and also because of the hilly nature of the country. Upolu possesses the best system of roads in the group, a post road running along the entire length of the north coast and a bridle-road along a large part of the south coast. The interior is served by narrow tracks.



B.N.A.

PAGO PAGO, THE PRINCIPAL PORT AND CAPITAL OF TUTUILA

Pago Pago has the best harbour in Samoa and lies on the south coast of Tutuila which belongs to the U.S.A. The harbour occupies the crater of an extinct volcano and the port is chiefly used as a naval station. The lattice masts of the powerful wireless installation can be seen on the right of the photograph. The area of Tutuila is 77 square miles, and it is about 70 miles from Apia



E N A

TOMB OF ROBERT LOUIS STEVENSON ON MOUNT VAEA, UPOLU

R. L. Stevenson, the famous novelist, settled upon an estate, which he named Vailima, at Apia in 1890. He came into conflict with the German officials by championing the cause of the natives by whom he was deeply loved. On his death in December, 1894, "Tusitala" was buried according to his wish on the summit of Mount Vaea, in a little plateau 1,500 feet above the ocean.

because the natives ascribed the visitation to the military occupation of the islands. Measles also has taken its toll.

The natives are probably the handsomest race of natives in the Pacific, if not in the world. Their complexion may be described as "café-au-lait." Their features are regular, their countenances open, and their wavy hair, naturally black, is dyed with lime to the colour of sealskin. Their stature averages about 5 feet 9 inches, and they are muscular and well-built, though the women, who

could serve as sculptors' models in early youth so perfect are their figures, tend to corpulence in middle age.

Their social organization is aristocratic, their manners gentle, and they are hospitable and generous.

Unfortunately, like other pure races, they lack the stamina to resist disease, and they seem doomed to perish unless the strenuous efforts now being made by the health departments to eradicate endemic diseases and to keep out foreign epidemics are successful.

SAMOA: GEOGRAPHICAL SUMMARY

Natural Division. Volcanic islets in the Pacific. (Cf. South Sea Islands.) Rose I., uninhabited and coralline, not really in the group. Coral reefs are a coastal formation.

Climate. Tropical in temperature, with little variation. Heavy rains in the southern summer months, when intense cyclonic storms occur. S.E. trade winds during rest of year.

Vegetation Tropical jungle, with parasitic growths; fungoid diseases on cultivated plants and animal pests.

Cultivation. Plantations worked by imported Chinese. Coconuts, bananas, cacao, pineapples, breadfruit. Other tropical plants and European vegetables for local consumption on a small scale.

Outlook. Natives useless for any organized labour. A land of riotous fertility. A sea liable to flood the shores. Rains likely to destroy in a day the work of months. A seeming paradise, Samoa has an ever-present danger of disease to man, beast and plant, and, except for copra, little prospect of development.

SAN FRANCISCO

The Cosmopolis of the Pacific Slope

by Fletcher Allen

Author and Journalist

SAN FRANCISCO to-day is like many other American cities, except that it is almost entirely of even more recent construction, dating in the main from 1910. But it has a mysterious fascination not at all diminished since the days of the gold rush and the silver boom, which really laid the foundation of its tremendous wealth.

Here, as in other parts of the United States, one finds the same massive buildings rising to the skies from broad thoroughfares. There is plenty of land for San Francisco to develop laterally, but it develops vertically also, although there is not much attempt to duplicate the architecture of New York by the erection of ever higher buildings.

Very little remains to recall the tempestuous days of 1848 and 1849; the city has been entirely rebuilt since then, and there is nothing to remind us of the lawlessness and vice that prevailed while men were flushed with the spoils of bonanza. The last link with licence went with the passing of the "Barbary Coast," a region of dance halls and drinking dens, whose ill fame spread throughout the two hemispheres.

Speculation Run Riot

Nor is there much to bring to mind the days of wild speculation when, in 1875, East and West were linked by the completion of the Central Pacific Railway, and San Francisco entered into the second stage of its history and became the meeting-place of adventurers who sought the promise and fascination of the new country. The actual gold rush was over, the mines were producing wealth scarcely to be counted, but, in the city, speculation rose and fortunes were made and lost in a few hours.

The exchange was a riot, and although to-day the operations are frequently several times the figure of the early days, it is recorded that with a limited population there was something over £100,000,000 outstanding on the exchange in 1875, and stock fluctuated by £10,000,000 within a week.

Medley of the World's Races

Nob Hill and Van Ness Avenue were the exclusive terrain of the wealthy of those days. Van Ness Avenue has retained that characteristic, and Nob Hill is only just beginning to give way to the assault of the moderately well-off residents.

Change has visited the physical character of San Francisco, but the lure and fascination, the cosmopolitan character of its people are still the same. The wanderers of all the world's highways arrive, either by the two transcontinental railways whose termini are there, or through the Golden Gate and the magnificent bay.

Overland, by rail, San Francisco draws from the United States and Europe, much as it drew in the earlier days, a heterogeneous company, many of whom still regard San Francisco as the luxury-loving, lavish, adventurously vicious community of the time before earthquake and fire purged the city.

Through the Golden Gate—that marvellous gateway to the Orient—down the five miles of strait which narrows to a minimum width of about a mile, where the sunset would baffle Turner by its tumult of colour, and the thin fog rolls, come the people of the East.

It is not very large, as cities are measured. The population of San Francisco proper is about 500,000. If



STREET PLAN OF SAN FRANCISCO WITHIN THE GOLDEN GATE

the most remote suburbs are included, the total population rises to a little more than 1,100,000. It could be lost in New York, become a suburb of Chicago.

Yet San Francisco is the strangest cosmopolis of the world. Out of the flow of travellers and the exchange of ideas, because of the presence of an excitement seeking, money spending crowd, many of whom had no anchorage in San Francisco, or anywhere else for that matter, San Francisco became a play city, a recreation ground, where pleasure ranked before all things and catering to it was the best business.

In course of time commercial life developed on a more secure foundation, and to-day San Francisco takes itself seriously, and expects to be taken so. It is a big factor in the national life, as well as in the world's commerce, but it will be long before the glamour of San Francisco appeals less than its industry; perhaps it never will.

It is a beautiful city, beautifully situated, possessing parks and natural

charm which compare more than favourably with those of any other city, whether old or new.

The principal street of San Francisco, Market Street, is one of the best-known thoroughfares in the world. Here, along its three miles of roadway, stretching from the Embarcadero past the Civic Centre, the life and spirit of the city are manifested. It is obviously a rich city, as well as cosmopolitan. The roadway, broad as it is (Market Street is 120 feet wide), is permanently congested with motor-cars in incredible numbers.

From the windows of the office buildings in the business district, the roadway is frequently completely obscured by cars, and their procession is as varied as that of the pedestrians on the sidewalks. Everything, from the humble Ford to the Rolls-Royce, is on the roadway, while walking past the shops are the peoples of the whole world from the turbaned Asiatic to the sinewy Australian.

Naturally there are many contrasts. San Francisco is a city of many cities. Nestling under the famous Nob Hill, where the early millionaires had their exclusive eyrie, lies the Chinese section. Passing into this district one leaves the West far behind. It is the East, slightly modernised as a prosperous, up-to-date Chinese city would be, and peopled by mysterious and immobile Orientals who pursue their own way, using Western civilization, but definitely refusing to be Americanised.

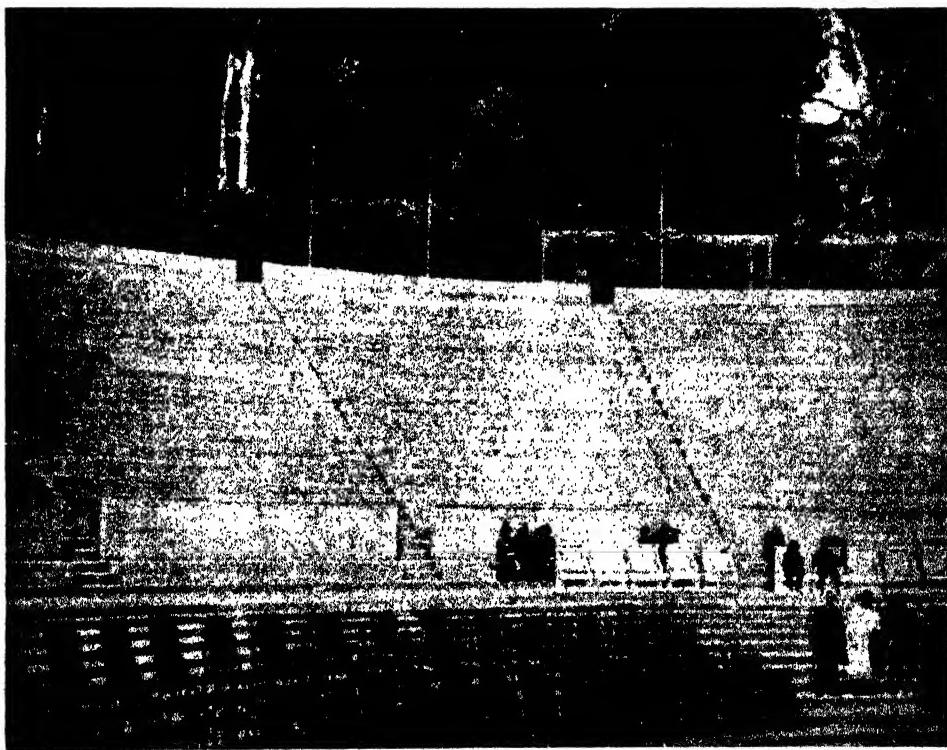
The quarter forms a city nearly a mile square, where the Chinese patter along in sandals, their arms folded and their hands hidden in the wide sleeves of their black silk jackets or magnificently embroidered, loose-hanging garments.

Many direct, and more oblique, attacks have been made on the colony, ranging from the indignity of a law striking at the pride of the Chinese by

compelling them to cut the queue, to the practical joke of an ordinance imposing a prohibitive tax on laundries, and there is a national outcry, which finds its most strident expression in California, against the growing hold of the invaders; but the placid strangers have so far weathered all storms.

The Chinese section is only one of the many foreign sections, but it is the most picturesque. Closely approaching it for colour is that part called Little Italy, which boasts its restaurants as Chinatown boasts its bazaars and laundries.

There is also a well-defined Ghetto, or Jewish quarter, and a district which might well have been lifted from Spain, and serves to remind the San Franciscan of the original character of the city, which not so very long ago was a Spanish military post in the wilderness. To a degree much more marked than in other cities, these foreign quarters



Florence Farmborough

OPEN-AIR AUDITORIUM AT BERKELEY'S FAMED CENTRE OF LEARNING

A favourite residential suburb of San Francisco, Berkeley, beautifully situated on the bay's east shore, is the seat of the State University of California. Opened in 1873, it is richly endowed and its course of instruction is similar for both sexes. The open-air Greek Theatre, erected in 1903 in a grove of giant eucalyptus, seats 7,500 persons and is used for university meetings and concerts.

assume a national characteristic. Entering them, the visitor has the sensation of having stepped out of one country into the heart of another.

Everywhere is change and variety. The life of the city is a perplexing mixture of leisure and haste. San Francisco has laid hold on the "siesta" hour of Spain, but because the climate is not torrid enough to demand sleep or rest in the middle of the day, the luncheon hour has become something of a social function. The city plays a little at midday, and commercial life, for all its energy, halts, and becomes an adjunct to social intercourse.

League of Trading Nations

In the massive hotels, such as the St. Francis or the Palace, towering above the ornamental gardens, the midday hour is essentially a social relaxation. The hotel entrances witness a daily parade which might be taken for an international review. The world is represented ; Italians, Greeks, Poles, Russians, Scandinavians and Asiatics pass by chattering in a babel of tongues, accompanied by the English-speaking peoples, making up a commercial Geneva, the congress of the league of trading nations.

It is the same in city and suburb. Even the water-front and Fisherman's Wharf have their touch of romance and internationalism. San Francisco Bay will show, at night, a scene that might have been borrowed from Italy, glowing with a thousand lights as the torches flare from fishing boats, while the fishermen haul their shining catch aboard.

Commerce under Gaiety's Cloak

In the factories, at the shipyards, in offices and shops, everywhere is the mingling of races. San Francisco sees much of the commerce of the world. Its piers, numbering over forty, cover an area of 4,500,000 square feet and handle 300,000 tons of cargo a week. From everywhere the merchandise comes.

Alongside the great American and European houses are the branches of

the important merchants of the Orient. The East, represented by Suzuki, Mitsubishi, Cho Ito, Nishin, competes on equal terms with the rest of the world for trade.

Finally, of course, though with a sense of unreciprocity, San Francisco must be taken as a commercial city. When the novelty of its gaiety and splendour has abated, the real significance of the city comes as a revelation. It is a very wealthy community, and boasts many flourishing industries. The atmosphere of leisurely romance gives place to a sense of solid achievement.

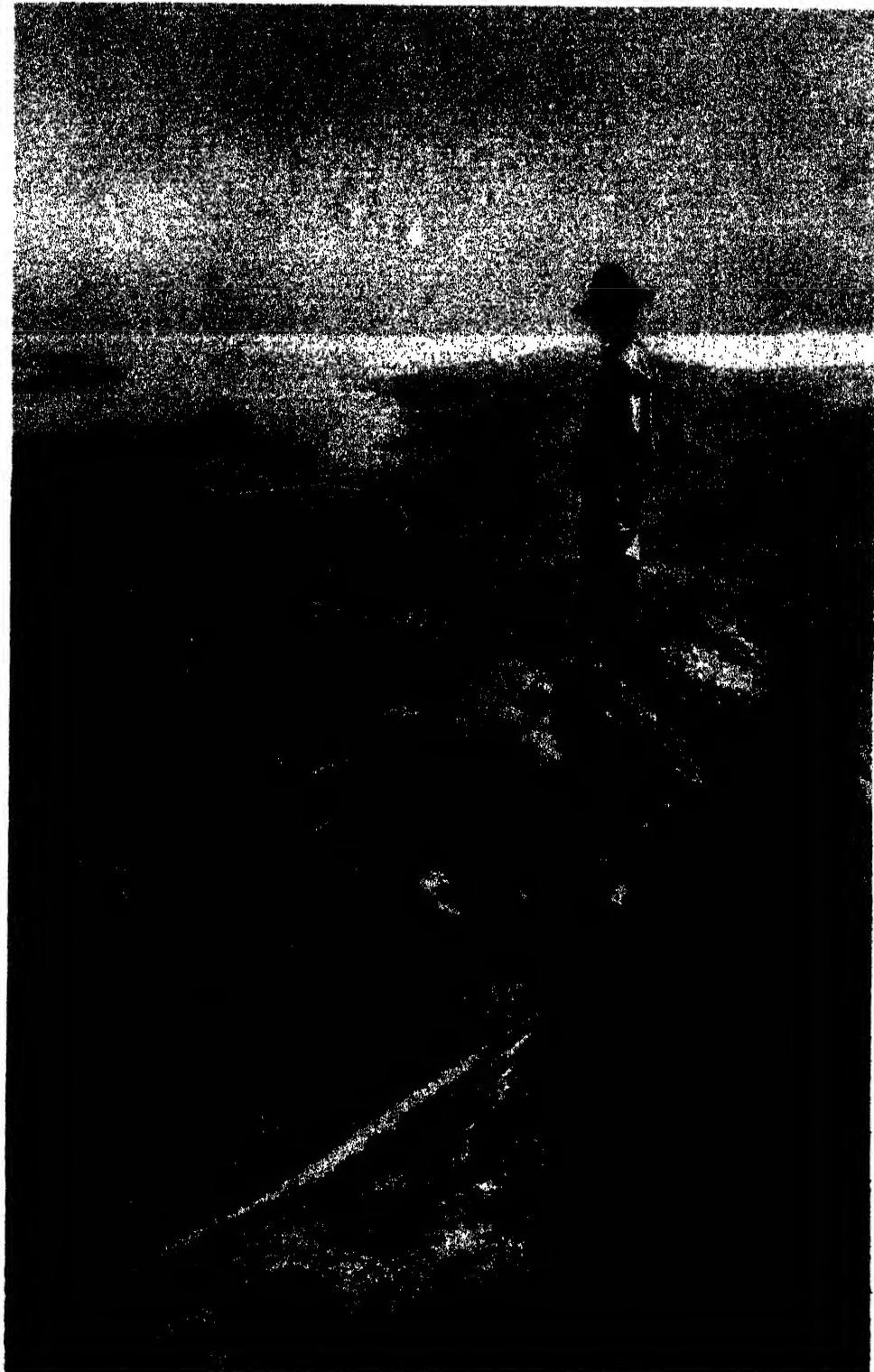
Moving in its own independent manner, the city, more deliberate of later years, but none the less enterprising than the rest of the country, passed through struggles that are part of human history, and in the progress found a local patriotism that is amazing, and steadily developed until it ranks to-day eighth in the table of wealth of the cities of the United States. The bank clearings do not fall very far short of £2,000,000,000 per annum.

Output of Principal Industries

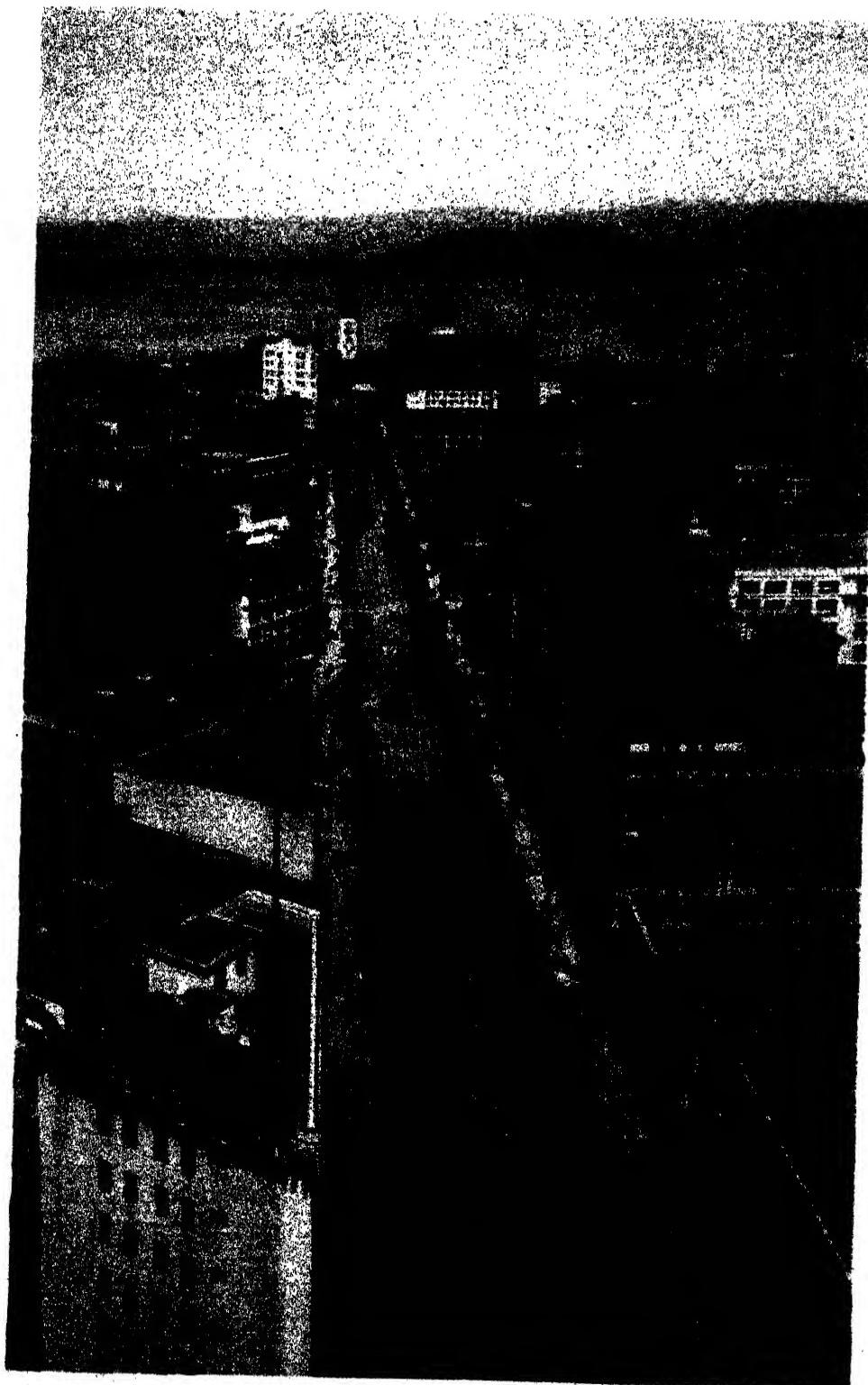
Its principal industries are headed by ship-building. In 1920 a deadweight tonnage of over 600,000 tons was built. In addition there are some 2,500 factories spread in and around the city, and an indication of the importance of San Francisco's commercial life can be gathered from the fact that five branches of business alone boast a combined annual product of well over £18,000,000.

The most considerable industries are printing and bookbinding, with a product of about £4,000,000 per annum ; slaughtering and meat packing, £4,000,000 ; fruit and vegetable canning, £3,000,000 ; foundries and machine shop products, £3,500,000 ; and lumber, £1,500,000.

This wealth, considerably augmented by the growing import and export trade of the city, is manifest in the magnificence of the new San Francisco. The old city is gone. In 1849 the San

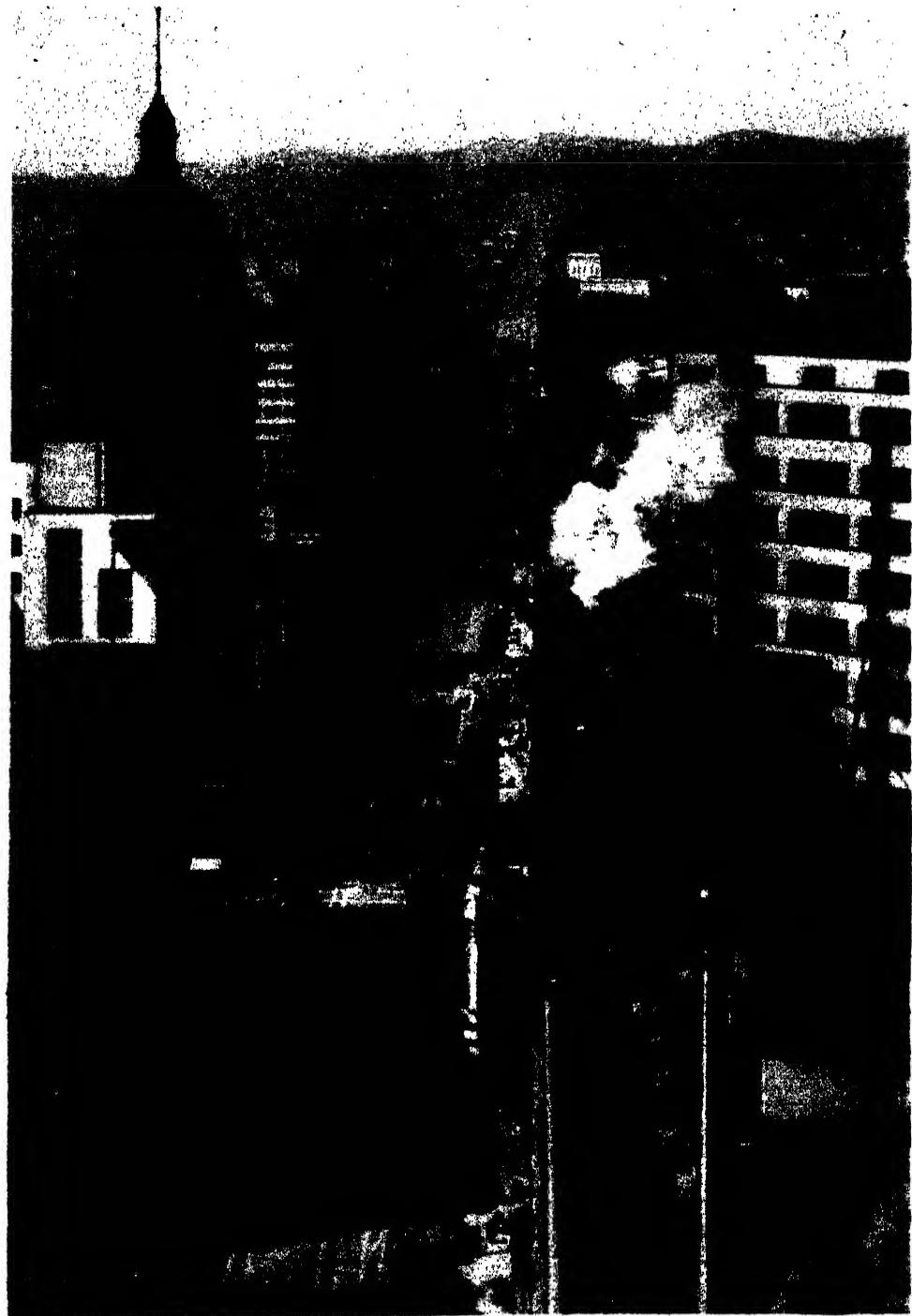


SAN FRANCISCO. From Mt. Tamalpais one looks across the Golden Gate to San Francisco Bay and the city's reef upon the far horizon



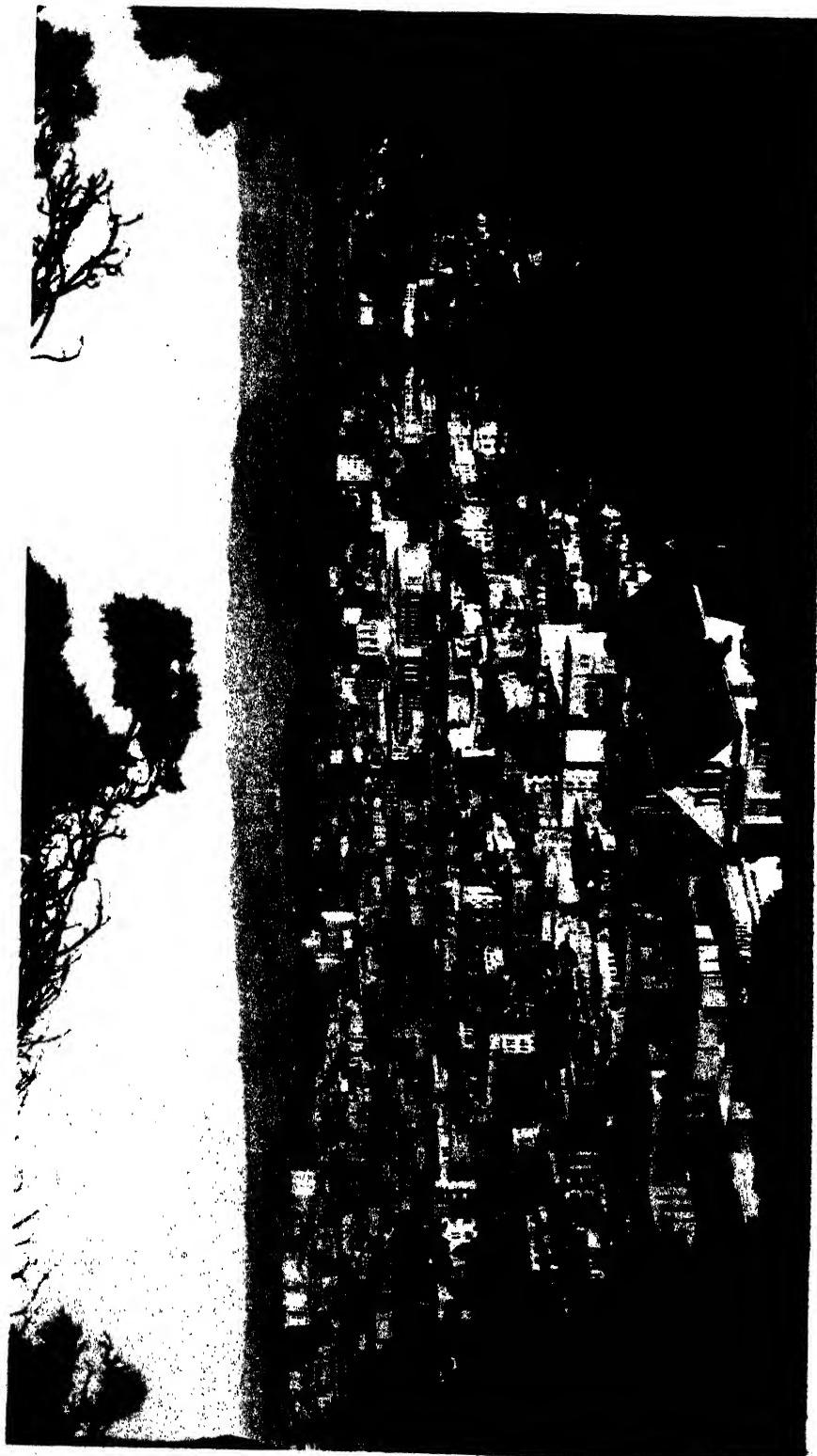
SAN FRANCISCO. Market Street, the great business thoroughfare, leads down to the Union Ferry Depot upon the wide bay

Evans Galloway



Ewing Galloway

*SAN FRANCISCO. Inland, Market Street runs towards the twin
Mission Peaks, its straight course marked by towering buildings*

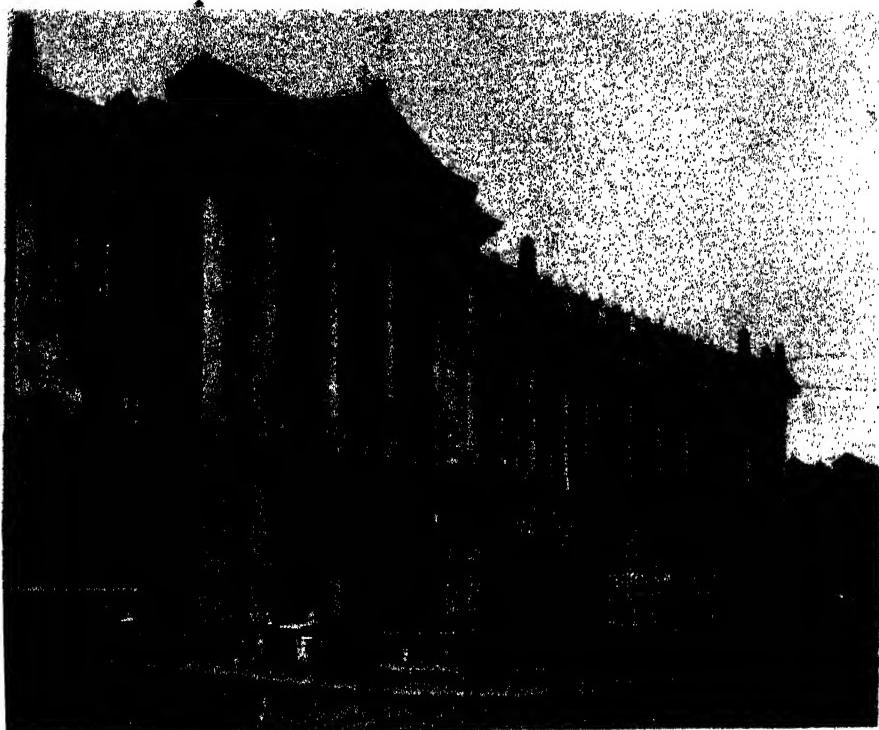


SAN FRANCISCO. From the lovely Buena Vista Park the city appears upon the hills which rise steeply beside the bay, their valleys silted up with a teeming accumulation of offices and homes, new-built after the earthquake.

Bwing Galloway

SAN FRANCISCO. On the left is a portion of Goat Island and across the water can be seen the buildings of Oakland and Berkeley; between these ever-spreading suburbs and the parent city ferry steamers ply constantly.





B. N. A.

Opposite the Congress building in the Plaza Montt Varas stands the handsome edifice of the Courts of Justice of Santiago



SANTIAGO. Two flights of steps lead up to the stately portico of the School of Arts in the Quinta Normal, not far from the Zoo.



The Mapocho Station, also known as the Mercado Station, is a fitting terminus for the line which traverses the continent



Albert K. Dawson

SANTIAGO. Upon this stall, crowded with fragrant blooms, lie flowers which are fair witnesses of the city's temperate clime



H.N.A.

SANTIAGO. Before the Palacio de la Moneda and the War Office
is a statue of Diego Portales, an early Chilean prime minister

Franciscans were not particularly wealthy, nor too enterprising. What population there was was decimated in the rush to the goldfields. Whole sections of the community moved out. The place was deserted, but with the stabilisation of the rush San Francisco found its feet as a city.

In common with the rest of the country its buildings were principally of wood, California red-wood being the usual building material and reputed to be the most suitable for use in the earthquake belt. By 1906 San Francisco was a greatly enlarged city, and in that year, following a series of tremors which were neglected or ignored as usual, the great earthquake occurred, succeeded by a fire which wiped out most of the buildings.

San Francisco the Phoenix

Feeding on the wooden structures, fanned by the changing breezes from land and sea, it raged for three days without hindrance. There was no hope of fighting it, because the water-mains were burst and twisted in the earthquake, and control was only finally achieved by blasting two rows of buildings on Van Ness Avenue. About 500 people lost their lives in the fire, and at one time there were 200,000 refugees camped in Golden Gate Park, while another 50,000 fled to the Presidio. The city was practically gutted.

Nothing could be done to extinguish the fire. The only thing to do was to let it burn out after its spread was prevented. It looked as though the last page in San Francisco's history was written. But, so great was the wealth of the city by this time, and so instant the response of the country, that by 1910, scarcely four years later, the destroyed section was practically rebuilt on modern lines, capable of resisting both fire and earthquake. For this reason the city is new. There are few historical relics, and for the same reason there are no unsightly slums.

One building, however, has remained through it all, the Mission Dolores (San

Francisco de Asis) situated near the heart of the city, and here for almost a century and a half services have been held. It serves to remind the San Franciscans of their history and origin, and, with the Presidio, is the little physical sign of the Spanish occupation. The Mission is practically unchanged. The interior is as it was when the Spanish brethren took up their religious work in the settlement.

Spanish Influence Persisting

It is a small building, but the style of its architecture is duplicated throughout California, and has influenced the development of a distinctly Spanish atmosphere in the suburban and country houses with their cool white walls and Moorish façades which almost persuade the traveller that he is in Spain.

The compulsion of disaster drew the people of San Francisco into a corporate unity, with a civic consciousness whose strength would be hard to surpass. "The City," as the native always refers to San Francisco, wherever he may be at the moment, is itself one vast monument to determination and the successful battling with overwhelming obstacles.

Removing Whole Hills

For actual location it is not particularly well chosen, despite its present beauty. It is built on almost numberless hills, with a somewhat inadequate water supply. The hills prevented rapid expansion, so many were razed, and others were tunnelled, for example, the Twin Peaks, approximately 900 feet above Market Street, which formerly cut off the south-western part of the city from the commercial quarters. Now the tunnel makes the journey easy. For water, San Francisco is rapidly completing a pipe line to draw supplies from the Sierras nearly 150 miles away.

In the same manner the citizens were dissatisfied with the arid expanse of dunes overlooking the bay, and for twenty years, under the guidance of a Scot, herculean labours were undertaken. In place of the windy dunes



B.N.A.

FOUR-MILE OCEAN BOULEVARD AND BATHING BEACH AT SAN FRANCISCO VIEWED FROM THE CLIFF HOUSE

San Francisco is highly favoured in its location on the north end of a peninsula lying between San Francisco Bay, a magnificent land-locked inlet, and the Pacific Ocean. The picturesque hilly background, the semi-tropical vegetation, with its wealth of blossom, the warm and equable climate, the gorgeous sunsets seen through the Golden Gate, the passage connecting bay and ocean, combine to make a very attractive city, beloved by all who have partaken of its hospitality. The view from the Cliff House, at the west end of Golden Gate Park, embraces a fair stretch of beach and ocean.



E. N. A.

IN THE CHINESE SECTION OF REBUILT SAN FRANCISCO

The new Chinatown of San Francisco is nearly a mile square, but lacks much of the charm which pervaded the old town, for it is an artificial quarter, a show-place made to order. Nevertheless, the Oriental characteristics of its picturesque theatres, temples, colour-filled bazaars and sinister gambling dens, erected in an improved and modernised style, still hold a strange fascination.

now lies the thousand acre Golden Gate Park, which, with the vast military reservation, the Presidio, crowns the hills, giving on to the wonderful bay studded with islands, among which can be seen Goat Island and the United States Naval School of the Pacific, Alcatraz with the military prison and Yerba Buena, which gave its name to the original settlement that later took the name of San Francisco.

Golden Gate Park stretches from the Pacific nearly to the centre of the city, and does not suffer in comparison with the ornamental grounds of any city in the world either for extent or beauty. In keeping with the people of the city, the park is filled with trees and shrubs and flowers drawn from every country, and they flourish luxuriantly in the open, lining a thousand

paths and roads for the enjoyment of pedestrians, horsemen and motorists, who pass through a perpetual blaze of colour towards the bay.

At the gate of the park is Rodin's "Thinker," and round an unexpected corner is the quaint bit of old Japan, the Japanese Tea Garden, with its wistarias and riotous azaleas, iris and cherry blossoms, among which move Japanese girls in the costume of their own country.

Adjoining the Golden Gate Park, and overlooking the Seal Rocks, where the families of seals can be seen resting or at play, is the Presidio, actually a military reservation, the largest in the United States, with its monster guns commanding the bay, but normally serving as a pleasure ground, and thronged with people.

Across the Bay lie Alameda, Berkeley and Oakland, all contributing to San Francisco, cities of importance in themselves. These, with Burlingame, San Mateo, Palo Alto and San Rafael are the more residential sections, and draw their residents from the city.

San Francisco has a pronounced social life. Clubland is practically a colony, and some of the San Francisco clubs have a renown that extends to the ends

singular manner the traditional openness of American hospitality with the dignified restraint of the older nations across the Atlantic.

A group of public buildings, called the Civic Centre, occupies the triangle formed by the intersection of Market Street with Van Ness Avenue and McAllister Street.

Here in the midst of the city, effectively disposed around a magnificent



E. N. A.

STATELY PILE OF SAN FRANCISCO'S NEW CITY HALL

The earthquake shock and fierce conflagration of April, 1906, reduced San Francisco to ruins ; with phenomenal rapidity the work of reconstruction went forward, and in four years' time a handsome modern city had arisen on the ashes of the old. The City Hall, an imposing new structure facing a fine square, stands at the southern extremity of Van Ness Avenue, off Market Street

of the earth. The Bohemian is one of the really great clubs of the world, the Olympic is one of the oldest amateur athletic clubs in existence. Not far from these two nestle another score of clubs, for men and women.

Everything is done on a lavish scale, perhaps too lavishly. San Francisco spends easily, but it is not an ostentatious city. Its life combines in a

Plaza, the work of great architects who matched their art against the pride of the city, stand the City Hall, the Auditorium and the Public Library, erected at a cost of nearly £2,000,000, to give material expression to the spirit of unity that prevails in the city of a myriad races, and to bear witness to the solidity of a city of romance and adventure.



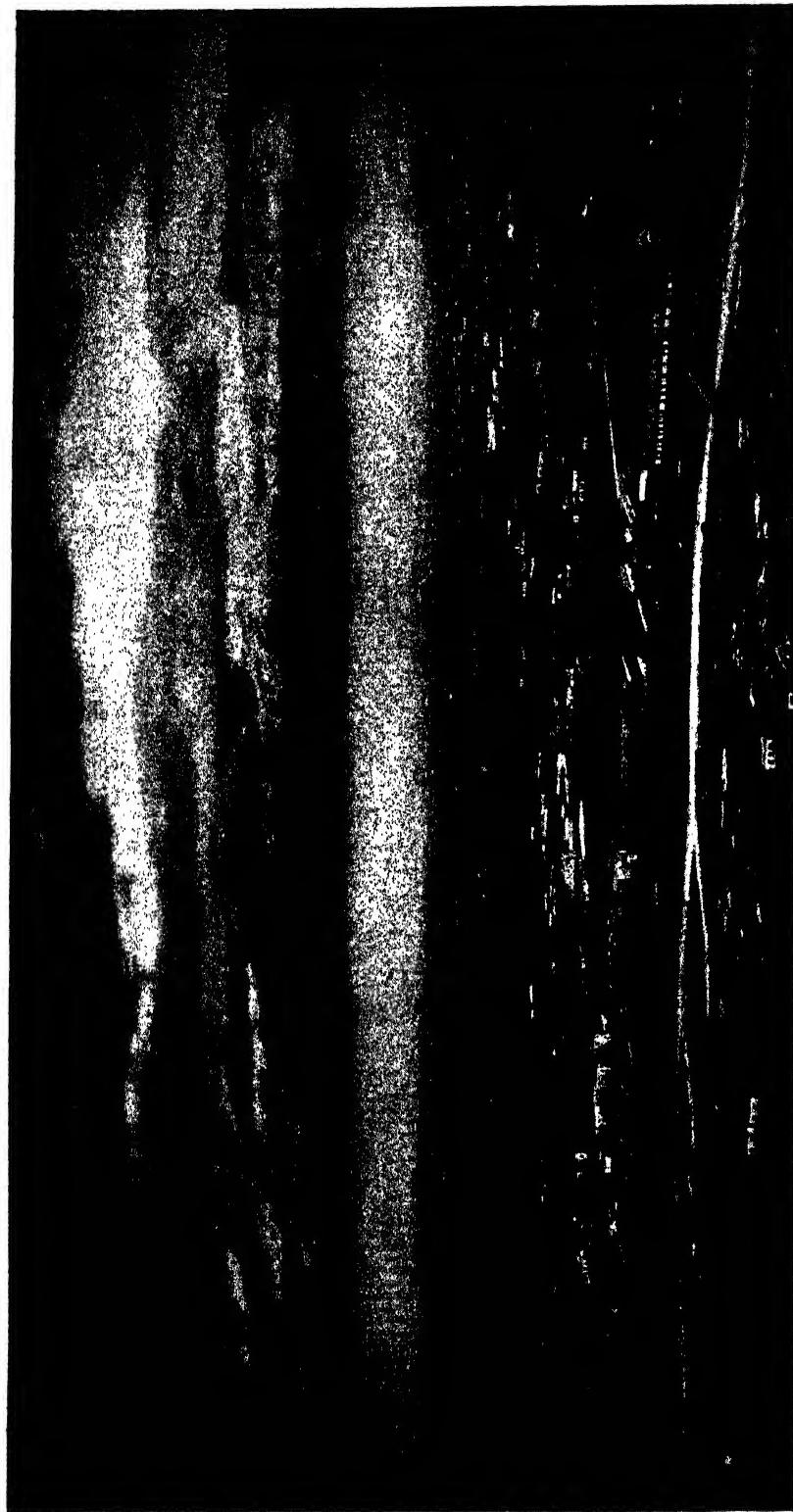
OAKLAND, FINE SUBURB OF SAN FRANCISCO, AND LAKE MERRIT

Many citizens of San Francisco have their home at Oakland, a beautiful suburb embowered in gardens and vineyards situated opposite San Francisco just across the bay. Formerly a vast oak park, as its name indicates, its rapid growth is rife with the romance that surrounds most of the modern towns of the West. Lake Merrit lies within the town limits and is the home of innumerable wildfowl.



CALIFORNIA'S GREAT CITY AND PREMIER PORT ON THE PACIFIC

The wooden houses which formed the prevailing type of San Francisco's architecture before the great disaster of 1906 have been replaced by lofty brick and concrete buildings. Varying from eight to eighteen storeys, these skyscrapers, gathered principally in the city's business section and forming a commercial skyline of considerable dignity, exemplify the triumph of dauntless human energy.



B. N. A.

LOOKING FROM SAN CRISTÓBAL TOWARDS THE SNOW-CAPPED PEAKS OF THE CORDILLERA

San Cristóbal is a hill in Santiago lying to the north-east of Santa Lucia and from it the white summits of the Andes can be seen across the plain rising above the clouds to a height of 17,000 feet. Through this stupendous bulwark comes the trans-continental railway which links the city with Buenos Aires. The plain beyond the city is the richest and most densely populated region of the republic. It is 60 miles in breadth and the alluvial soil is watered by the streams which flow down from the Cordillera, making it an agricultural and pastoral district of great productiveness.

SANTIAGO

Chile's Mountain-shadowed Capital

by C. R. Enock

Author of "The Andes and the Amazon"

SANTIAGO, anciently designated "most noble and loyal," the capital and pride of the enterprising republic of Chile, lies in the valley of the Mapocho river on a wide and beautiful plain at a distance of 115 miles from the Pacific ocean at the seaport Valparaíso. It is overhung to the east by the great main Cordillera of the Andes, which unfolds its striking panorama from south to north with snowy peaks rising to 17,000 feet.

The city possesses that great advantage, enjoyed by few South American capitals, of being upon a trans-continental line of railway which links its life and activities with those of its neighbours and the outside world. The famous Trans-Andine railway from Buenos Aires crosses the mountains with a tunnel piercing the crest at 10,880 feet elevation.

As a barrier to foes, moreover, the Cordillera is not impregnable, as the royalists of Spain learned when the "Liberator" San Martín, of undying South American fame, the "Hannibal of the Andes," scaled and passed the snowy range and caused the flag of Spain to fall in Chile.

Centre of the Civilized South

The city stands at an elevation of over 1,800 feet above sea-level and enjoys an excellent climate with a moderate rainfall, and its situation, far beyond the tropics—Latitude 33° 26' 42" South—ensures freedom from the diseases which often affect the more northern towns on this coast and hinterland.

The plan of the city is diversified by several rocky heights rising a few hundred feet therefrom, as the famous Santa Lucia Hill, and others. With a

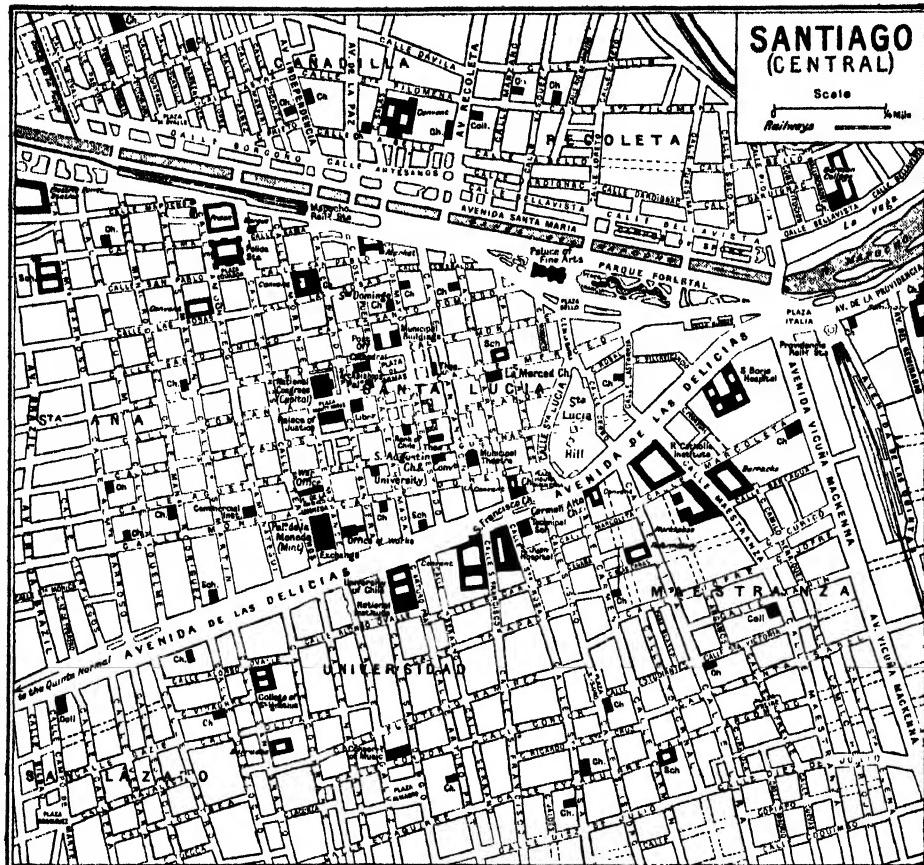
population of nearly three-quarters of a million and the active character of its people, Santiago forms the leading centre of civilization throughout the vast region embodied in the southwestern part of the continent—for Chile extends for over 1,500 miles below it to the frigid and stormy Cape Horn, and towards the tropics northwards for about 1,000 miles.

An Epic of American History

The history of Santiago takes us back to the times of the Incas, who sent expeditions often and unavailingly against the redoubtable Araucanian Indians of Chile. Then came the Spaniards, conquerors of Peru. The first was Almagro, partner of Pizarro the Conquistador, who with his band of valiants, afterwards the "men of Chile," made one of the most terrible marches in that time of rugged endeavour in these lands, having heard from the Incas of the great land of Chile, lying beyond all human ken across the deserts and the mountains.

But it was his successor, Pedro de Valdivia, who with but 150 Spaniards and a host of Indians, the white men greedy for gold and careless of native life and suffering, reached, alternately starving and fighting, the lovely plain of the Mapocho, and in February, 1540, took his stand on the impregnable rock of Santa Lucia—surmounted to-day by his bronze statue—and from there as a centre and a citadel directed the first building of Santiago.

The hamlet that first arose was but a poor collection of thatched huts, on the island-confluence of the two Mapocho branches, and it suffered many vicissitudes, such as rebellion among the



HOW SANTIAGO SPREADS ABOUT THE CANALISED MAPOCHO

Spaniards, earthquakes, floods and an attack by 10,000 Indians, who set the place afire and drove the whites into the citadel.

There stands forth at this time the figure of Inez Suarez, a name unforgettable in Santiago. She was a beautiful girl, the only Spanish woman in the country, and the mistress of Valdivia. She attended the wounded, she struck off the heads of six captive Indian chiefs, and hurled them down to affright the enemy, and, clad in a coat of mail, fought side by side with her countrymen.

The Araucanians were a stubborn race, and were never entirely overcome, though Valdivia controlled the region by establishing chains of forts. The brutalities practised on both sides formed a terrible baptism to the new settlement. Once Valdivia cut off the

hands and noses of hundreds of his Indian captives and sent them back to spread the horror among their companions, as a warning, while the Indians responded ironically by pouring molten gold down the throats of their Spanish prisoners, saying : " You came hither for gold, now you have it ! "

As for Valdivia, a dreadful fate befel him, for after some years as governor of the new colony of Chile he was captured in an attack upon the Indians, his heart cut to pieces and devoured, and his bones turned into war flutes ; and indeed the manner of his death is too revolting to be described.

If man was savage here, nature was also frightful at times, and earthquake shocks successively laid Santiago in ruins, as it did other cities of this vast seaboard. One of the worst of these catastrophes was that which, on a dark

night in May, 1647, threw down every church and almost every house and killed 1,000 people; and there were others, as in 1730 and 1751. But the shock of 1906 which destroyed Valparaíso affected the capital but little.

The nineteenth century brought with it revolution all over America against the mother countries, and in February, 1817, San Martín and his adherents, the revolutionary or patriot forces, defeated the royalists at Chacabuco and occupied Santiago. The city, although it has suffered many political upheavals—including that brought about by the imperious Balmaceda (born in Santiago in 1838)—prides itself on never in its history having been subjected to a regular siege.

The modern city covers some eight square miles of territory, which is traversed by the river. In earlier times the swollen Mapocho, overflowing its banks, often flooded the city, and in 1609 and 1783 wide destruction and suffering were caused by this. However, during the administration of Ambrosio O'Higgins, the Spanish captain-general, in 1792, the waters were contained by stone embankments forming a channel 130 feet wide.

The story of O'Higgins is romantic and his is a famous name in Chile. He was Irish, born a ragged barefoot boy in Sligo, was sent to Cadiz by an uncle, went to Lima and kept a small shop, made a fortune in Santiago and became, by royal seal of the king of Spain, general, marquis, baron, and governor of Chile,

ultimately dying as viceroy of Peru at eighty years of age.

His natural son, Bernardo O'Higgins, was equally or more famous. He was educated in England, visited Spain, lived on his estate in Chile, became an ardent patriot, allied himself with San Martín and after the victory of Chacabuco became director-general of Chile. The ladies of Santiago, it is said, detested him and the republic. In 1823 he retired to Lima.

The Mapocho river is crossed by



R. N. A.

ARISTIA BUILDING, CALLE BANDERA

Santiago is rapidly following the example set by other important South American towns, such as Rio de Janeiro and Buenos Aires, in building large commercial structures on modern lines. These activities have been somewhat hampered by the scarcity and greatly increased cost of the materials



R. M. S. P.

ELABORATE ENTRANCE TO THE PLEASURE GROUNDS UPON SANTA LUCIA, ONCE THE CITADEL

Santiago was founded in 1541 by Pedro de Valdivia, the Spanish governor of Chile, who made his camp upon the inaccessible crag of Santa Lucia and fortified it against the Indians. About this stronghold the city grew up, and to-day a statue of Valdivia stands on the summit of this town's gigantic foundation stone. Here, too, gardens have been laid out and theatres and luxurious restaurants erected. Among the other parks are the Cousiño, the Forest and the Quinta Normal, in which are the schools of agriculture and horticulture. Besides these pleasure grounds the city possesses several racecourses where meetings are held on Sundays.



VIEW FROM THE ROCKY HILL OF SANTA LUCIA IN THE CENTRE OF SANTIAGO, THE CAPITAL OF CHILE

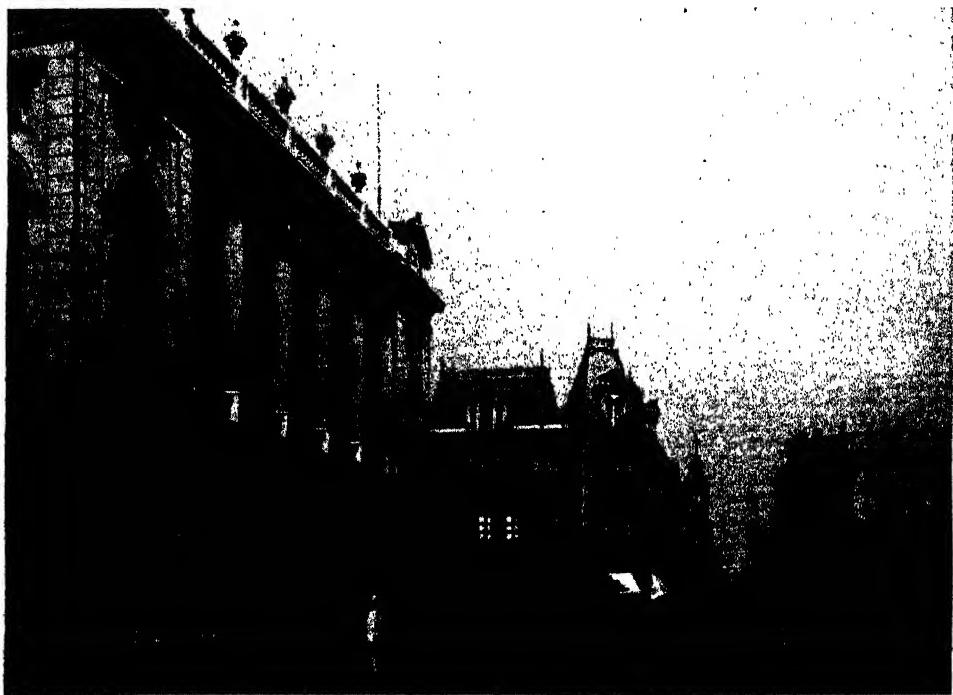
Santiago with a population of over 500,000 is the largest city in South America west of the Andes, and is shut in from the sea by a range of mountains, forming a portion of the lovely valley of Chile. The city is well laid out after the style of Latin American towns with broad regular streets and extensive plazas; the tree-bordered Alameda or Avenida de las Delicias, at the northern end of which rises the hill of Santa Lucia, bisects the whole. Santa Lucia is more than 300 feet above the level of the valley and has been transformed into one of the many Parks in Santiago.



E.N.A.

PORTAL EDWARDS IN THE AVENIDA DE LAS DELICIAS

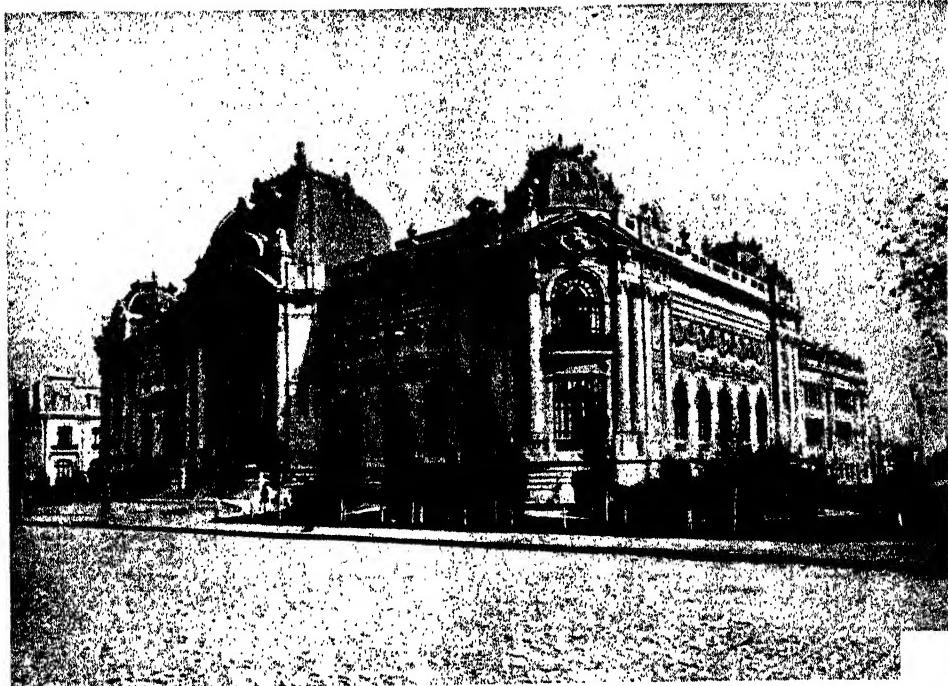
The Portal Edwards is an arcade running along the front of the Royal Hotel which occupies practically the whole block. Half-way along the arcade is an entrance to the Teatro Politeama which is in a block to the rear. The Avenida de las Delicias terminates at the Plaza Argentina, a short distance beyond the spot whence the photograph was taken. To the right is the Calle Bascunan Guerrero



Albert K. Dawson

SANTIAGO: ARCADED ENTRANCE OF THE FINE MUNICIPAL THEATRE

At the corner of the Calle San Antonio, the road running across the photograph, and the Calle Agustinas is the splendid Municipal Theatre, the largest in the city. Formerly the streets were nearly all cobbled, but they are now paved with asphalt and electric trams serve the main thoroughfares. The Calle Agustinas is about one mile and a half long and reaches from the Avenida Portales to Santa Lucia



SPLENDID "PALACE OF FINE ARTS" IN THE PARQUE FORESTAL

This big, handsome building houses a very fine collection of examples of modern Chilean art which has made considerable progress within the last few years. The exhibition of sculptures is particularly noteworthy. The Parque Forestal consists of beautiful gardens close to the Mapocho river and stretches from the Plaza Italia almost to the Mapocho station beyond which is the Centenary Park



SANTIAGO'S CATHEDRAL HALF-HIDDEN IN THE PLAZA DE ARMAS

Pedro de Valdivia erected a wooden church on the site now occupied by the present cathedral. His building was reconstructed by Mendoza, but was destroyed by an earthquake in 1647 and completely replanned in 1748. At the base of the right-hand tower can be discerned a portion of the dome at the other extremity, which is surmounted by a small spire. The church is over 100 yards long

several handsome bridges, the oldest of which, begun in 1767, has eleven arches. One of those broad, handsome avenues of which Latin American citizens are fond, the Alameda, runs for two miles through the heart of the city, and its name, the Avenida de las Delicias, sufficiently describes this thoroughfare. Planted with trees and traversed by channels of running water whose shade and murmur fall pleasingly on the senses in the hot noonday, it forms a fine drive or "paseo," and here live the wealthy folk of Santiago.

Town Planned Like a Chess-board

The principal object of note, perhaps, is the Santa Lucia Hill, rising 400 feet from the city, whence a pleasing view of Santiago, spread out below, is obtained. It is, or should be, reminiscent of the heroic and ruthless Conquistador Valdivia and his consort, the beautiful and heroic Inez Suarez. But its original form and character are largely disguised by ornate and often rococo works, such as balustrades, monuments and stucco vases, which, however, help to make the ancient citadel a popular pleasure resort.

The streets of Santiago are laid out with the customary chess-board regularity with which the traveller in America, North or South, becomes familiar. It is a somewhat monotonous plan, however. These often broad streets form parallelograms or blocks, some of which constitute the plazas or public squares. The principal of these is the Plaza de Armas, upon which the cathedral faces. This tree-planted square is characterised by its colonnades, famous in the history of the city.

City's Dual Personality

Santiago may be described as to its general character as a mixture of French and Spanish—Paris, Madrid, Seville; but it is perhaps more modern than Spanish cities, owing to its broad boulevards and electric tramways; while the activity of its people and its

great size and business-like character stamp it with the air of a metropolis.

The public buildings are often fine, even magnificent, but some do not reveal any very distinctive character or the atmosphere of the ancient centres of the Spanish viceroys, as Mexico, for example. The cathedral is the oldest of all the churches, and owes its original foundation to Valdivia, for the Conquistadores and the priests who accompanied them—as witness Pizarro in Peru, Cortés in Mexico, and others—made it their early work to found such.

It must be borne in mind in chronicling the often ruthless operations of the Spanish in the New World that they built beautiful or picturesque temples in scores of places, over thousands of miles of originally heathen desert and Cordillera, and stamped thereon the character and piety—were it mixed often with the semi-superstition—of the Christian Church as represented by the Roman Catholicism of the period.

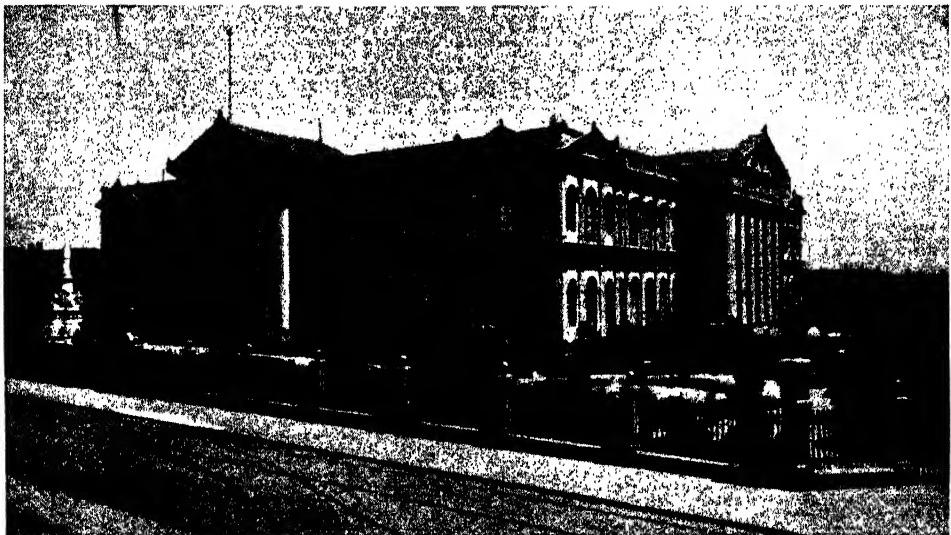
Principal Public Buildings

Their ruthless deeds were generally done against the commands of the Spanish sovereigns, who would rather have upheld the native princes, as far as compatible with Spanish suzerainty.

Valdivia's cathedral was rebuilt by Mendoza, but it did not survive the earthquake of 1647. A hundred years later it was rebuilt on a new plan, and is 351 feet long and 92 feet wide, with a spired cupola which, however, does not particularly command attention. The interior of the edifice is more pleasing; decorations are rich and in good taste.

Principal among the other ecclesiastical buildings are the church of San Augustin, which was built by Cristóbal de Vera in 1595, and the eighteenth century churches of San Francisco, La Merced and Santo Domingo, the church of the Reformed Dominicans, the Carmen Alto and Augustine nunneries, the last dating from 1576.

The archbishop's palace is a fine building, and there is a chapel to the memory of Valdivia hard by the house



NATIONAL CONGRESS BUILDING FACING THE CALLE BANDERA

Within this imposing structure the two houses meet in Santiago, and one of its features is the central hall which measures 45 yards in length and 16 in breadth. This hall is used when a new president is inaugurated and the houses are assembled to hear the president's speech. Before the Congress building is a statue, marking the site of the church of Compañía which was burnt down



Albert K. Dawson

CALLE AHUMADA IN THE COMMERCIAL QUARTER OF SANTIAGO

From the Avenida de las Delicias the Calle Ahumada leads in the direction of the Plaza de Armas where it is continued as the Calle del Puente. In the photograph we are looking towards the Avenida and the Calle Agustinas is on the right with the Bank of Santiago standing at the corner. It will be noted that the trams are single-track and kept to one side of the roads

in which he is said to have lived. The site of the Jesuits' church, burned down in 1868, where it is said 2,000 worshippers perished, is marked by a commemorative park and column.

We find the customary cemeteries in which the Latin Americans bury their dead, here considered fine; one for Roman Catholic burial, the other secularised. In Santiago, as in some other Latin American centres, mural interment is usual.

Houses of the Administrature

Santiago is the centre of government, represented by the president, the national congress and courts of justice. The Capitol is a building characterised by its rows of massive columns and is surrounded by handsome gardens; and the Moneda, an edifice noteworthy on account both of its dimensions and its age, is the residence of the president and contains offices of cabinet ministers.

The Congressional Palace, the Courts or Palace of Justice, the municipal and other theatres, the Palace of Fine Arts, the Quinta Normal, containing the national museum, with the Zoological Gardens, etc., the Lyceo, or school of arts and trades, the Conservatory of Music, the Medical, Military, Agricultural, Mining and Normal Schools, the Mint, the Office of Posts and Telegraphs, are all institutions reflecting the status of the city. The university of Chile, dating from 1842, succeeded the old Universidad de San Felipe, of the year 1747.

Lavish Decoration of Homes

The racecourses of Santiago are thronged on Sunday afternoons, the time of popular racing—as customary in South American cities—and here wealth and fashion are displayed. Tennis, golf and other modern sports are well represented.

The fine private residences are of the character familiar to the traveller in these lands, from Mexcio southwards, as is the kindly and courteous character of their inmates in general.

The well-known plan of house embodies a central court or patio, entered by a massive zaguan or doorway, large enough to admit a mounted horseman, with heavy doors and a wicket; while the windows looking on the street, close against which the building stands, without garden or area in front, are strongly barred—a wise precaution.

The style of house is, of course, inherited from Spain and the Moors. The patio, generally open to the sky, forms a pleasing lounge, generally adorned with fountains, shrubs and flowers. The larger houses are often decorated in front with elaborate designs of classic capital, frieze, façade and wreaths of flowers and Cupids; sometimes rose-tinted, matters readily modelled in stucco which often forms the structural material. Indeed the effects of tinted stucco as displayed in Santiago are a matter of note by travellers generally.

Among the Alameda Crowds

Social life is well reflected in the public promenades. We may join in the throng that invades the Alameda, where rich and poor, young and old, congregate. We may not, though, elect to stare unabashed at the ladies, nor make audible remarks upon their beauty and elegance as customary here and in Spanish American cities in general, a custom which, rather than being bad form, is regarded as quite in order.

Or we may attend the temples and remark the wearing of the becoming manto by the female worshippers, the edict of the Church being against hats—and the power of the clerical element is strong in Chile. The poor however, keep apart; they have nothing in common with those others, though except for the inevitable growing of Socialism there is little class feeling displayed.

Many of the commercial enterprises are represented by foreigners, to whom Chile owes much, although by no means all of its activities, for the Chilean is by nature active and often successful in joint-stock enterprise, a rare quality with the Latin American race.

SAO PAULO

Metropolis of Brazil's Coffee Trade

by Lilian E. Elliott

Author of "Brazil To-day and To-morrow"

THE city of São Paulo, busy, bracing, well-built, prosperous, is not only the greatest industrial centre of South America, but records the most rapid development since 1890 of any town in the New World.

At that time the population had reached about 61,000: by the middle of 1924 São Paulo counted 750,000 inhabitants. Yet, although this capital of Brazil's "Leader State" has had its booms and slumps (in cattle as well as coffee, the premier industry), a hard-headed policy of industrial development has built up a permanent population, solid and stable wealth, firmly established in a score of different directions. São Paulo has not put all her eggs into one basket.

The proudest of the city's residential sections, the famous Avenida Paulista, "built on coffee," bordered by some of the most sumptuous mansions that can be seen in the world, runs out along a ridge, a hog-back, from which long green plains flow and fall away, with roads or ploughed fields showing the vivid blood-red soil that has proved such a genial foster-mother to the coffee shrub.

Centre of a Web of Railways

Eastward, the São Paulo plain, elevated about 2,500 feet above the sea, quickly runs to a definite edge, breaking sharply to the South Atlantic less than 50 miles away. There shines the steel line of the great coffee-carrying railway that, gathering in an average year some 10,000,000 sacks of coffee beans from a fan of interior lines to the great transferring centre of the city, carries down the tremendous stream to the sea at Santos—where, in the busy export season, a dozen great steamers call

weekly. Santos itself, practically a suburb of São Paulo, has a population of 125,000.

Southward, another long steel arm connects São Paulo with the other southerly states of the Brazilian Union, Paraná with its pine forests, Santa Catharina with its coal-fields, Rio Grande do Sul with its great stock-raising pastures, running on still farther south right across Uruguay to the Río de la Plata at Montevideo. Northward, a government line brings Rio within a ten-hour journey.

Happy-go-lucky Town-Planning

Return in your indispensable motor-car along the magnificent Avenida Paulista, where houses, gardens and roads are alike beautifully kept, delightfully fresh and clean, and descend to the "Coração da cidade"—the old "Heart of the city." The streets wind, cross at all sorts of angles, for São Paulo was not built upon a rectangular plan like so many South American cities; it grew. And it grew in a happy-go-lucky manner, following the lines of a stream, the bank of a gorge.

Energetic Paulistas are constantly filling in, widening, cutting down, constructing, but it is still possible to follow the old plan of the Jesuit settlement, founded in January, 1554, by that great colonising missionary, Father José de Anchieta. The converted Indian chief, Tibiriça, came in, settling his tribe along a road which is now the Rua São Bento; and this street, lined with fine stores, offices, great business and bank buildings, forms one side of the little triangle which is the "Coração da cidade." The other two sides are formed by the Direita and the Rua 15 de Novembro.

The little tree-shaded triangle is dear to the Paulistas, and city improvements leave it unscathed ; about it are clustered the chief business establishments, the financial houses, most of the fifteen native and foreign banks—reminders of the fact that the state income of São Paulo is bigger than that of Cuba or Chile, and that within 200 miles of the “*coração*” dwell over 8,000,000 people. Down the Rua Quinze (15 de Novembro) is a resplendent branch of one of London’s oldest jewelry houses, displaying gems fit for coffee kings ; dazzling clothes, in another British store ; and there are plenty of North American firms, with competitors from every commercial country.

No nation with goods to sell neglects São Paulo, and the Paulista gives a welcome to every comer, as an immigrant-inviting region should. But, both numerically and as regards solid

wealth, the Italian share is the most remarkable, and if you would understand the rise of this city, what it has done for the North Italian and what the North Italian has done for São Paulo, you must go at close of day to one of the factory regions. Mooca is an excellent example. Huge mills are clustered here ; cotton spinning and weaving, for instance, occupy 30,000 people ; there are ten woollen mills ; four factories, using jute from India, make coffee sacks. Boots and shoes, glass, biscuits, straw hats, earthenware, beer, wines, liqueurs, newsprint, cardboard, wrapping paper, matches and furniture—all these are made in São Paulo, and among the most important of recent establishments are metallurgical works where Brazil’s own iron is hydroelectrically smelted.

For electricity is cheap and plentiful in this city. Near-by falls have been



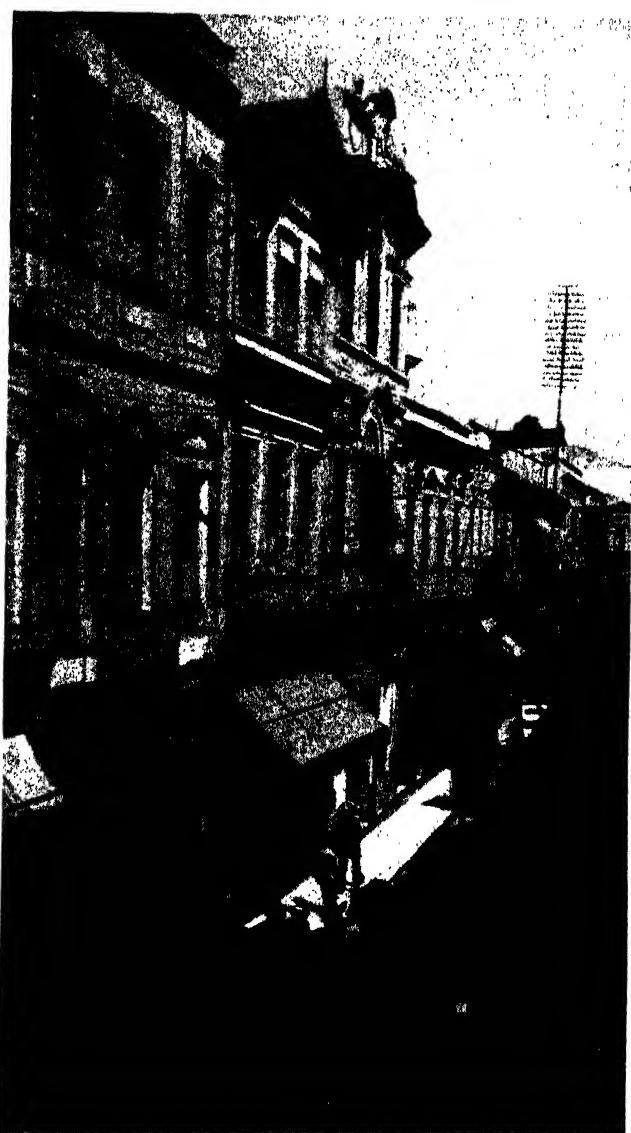
MAP OF THE FIRST COMMERCIAL CITY OF BRAZIL

harnessed, and the Canadian operating company sells light, heat and power to a centre which has no older systems to replace. Thus, 160 miles of tram-lines are served by electric power; about 30,000 h.p. is supplied daily to factories, and all public and private lighting, and a good deal of cooking and heating (for during the rainy winter months, June to September, the climate is chilly, especially after six o'clock sundown) depend upon electricity. Wherefore the astonishing maze of Moóca's factories is not smoke-grimed, and the crowds of girls and youths and men who presently stream from the doors are gaily dressed.

Thousands and thousands of workers, alert sturdy, hurry to street-corners to take the long lines of street-cars; the sound of the mill escapes, and car-loads of goods run out of a siding. Rub your eyes! Yes, this *is* South America. And listen to the chatter of those rosy-cheeked, black-eyed girls; every one of them is talking Italian.

The newspaper sold by this smart little lad is in Italian, too, and if you would see more of the life of the workers, upon whose strength all this development has been constructed, get up before dawn one fine morning, go to the big public market near the Cantareira station, and before five o'clock you will understand why the Italian prospers in São Paulo.

You will see scores and scores of carts laden with every kind of fine fruit



H. J. Kitchen

NARROW THOROUGHFARE OF RUA SAO BENTO
Though Rua São Bento, which forms one side of the "Heart of the city," may not be so wide as some of the streets nor lined with such pretentious buildings, it is of especial interest owing to its being the site of the first settlement, founded by an Indian chief

and vegetables, brought in by the growers from exterior gardens; stalls piled high with immense relays of salads and flowers; and in half an hour the place is thronged with broad-cheeked buyers, taking home, in enormous baskets, celery and potatoes, macaroni, cheese, tomatoes; a baby goat led by a string is also for the family pot. Outside, a new road is being made—



R. M. S. P.

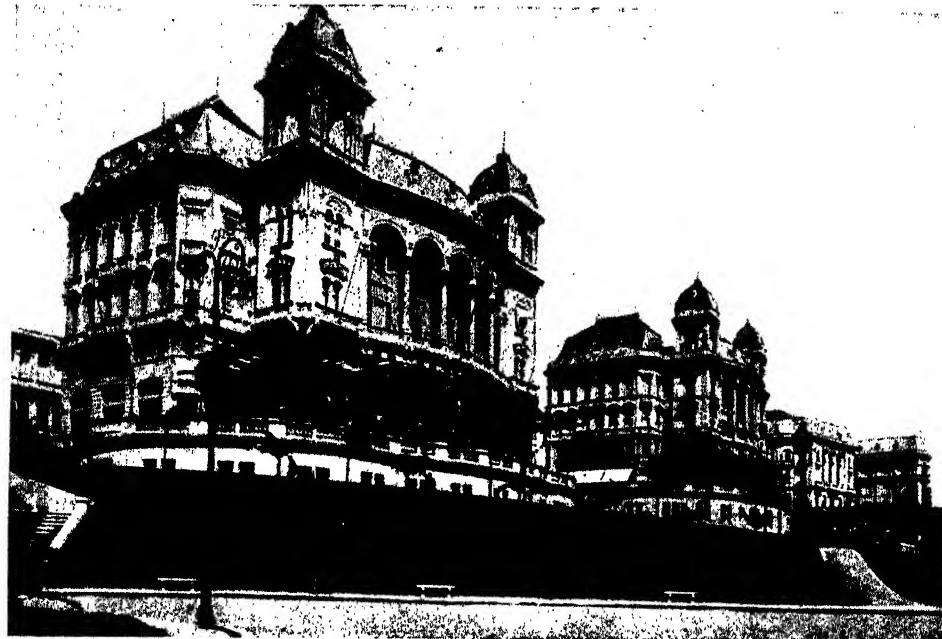
VAST CITY OF SAO PAULO EVER SPREADING FARTHER ACROSS THE WIDE PLATEAU

São Paulo has never been cramped for space and has expanded gradually in every direction across the tableland which rises almost imperceptibly out of the rolling plains of the interior. The city shows few signs of its great age and the remaining buildings of the colonial days are very hard to find. It is one of the city's boasts that there are no poor and no slums, and despite the manufacturing activities, there is an almost complete absence of grime. This last condition is doubtless due in some part to the cheapness of electricity which is largely used in the factories and for domestic purposes.

B. N. A.

CITY OF SAO PAULO, CAPITAL OF ITS STATE AND BRAZIL'S GREAT INDUSTRIAL CENTRE
São Paulo is chiefly built on a great tableland, but a minor section of the city occupies the flats bordering the Tieté river. The state of São Paulo grows more coffee than any other in Brazil, and the coffee bean was responsible for the city's rapid growth, though it is not dependent on this alone. There are woolen mills, cotton factories, smelting works, and various manufactures of household goods. The city had its birth in a little Jesuit mission settlement, and at the beginning of the twentieth century the population was about 300,000 which number has since been more than doubled and still increases yearly.

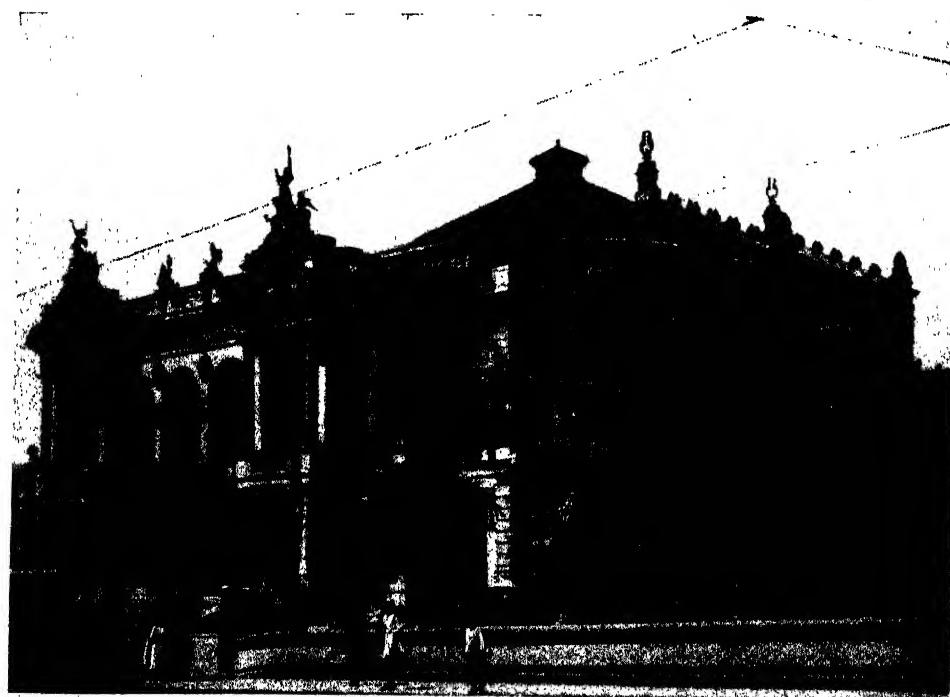




R.M.S.P.

IMPOSING MUNICIPAL OFFICES IN RUA LIBERO BADARO

Rua Libero Badaro runs from the Largo do Riachuelo to the Largo da São Benito and in it stands the large building containing the municipal offices. The street has on either side many important commercial houses, and the improvement of this district was part of the municipal scheme for cleansing and beautifying São Paulo. The roads are watered and swept daily and the refuse burnt hygienically.



Ewing Galloway

SAO PAULO: THE FINE BUILDING OF THE MUNICIPAL THEATRE

The Municipal Theatre in São Paulo is scarcely surpassed by that in Rio de Janeiro and will bear comparison with many of the finest in Europe. It stands at the end of Rua 24 de Maio facing Rua Itapetininga, which leads from the Praça da República and before reaching the Largo da Sé changes its name to Rua Direita, one of the boundaries of the "Heart of the city."

with Italian labour—and these men will work long hours every day, and on Sundays as well, to make money. All the Italian colony of São Paulo, and that means more than one-third of the city population, is proud of their compatriot the famous Matarazzo, who started life here as an immigrant pedlar, and at length came to own twenty factories, distributed his goods all over Brazil, and succeeded in marrying one of his pretty daughters to a prince.

Another of the new, fast-growing districts is Ypiranga, with a slope to the top of the historic hill where Prince Pedro, in 1822, declared the independence of Brazil from Portugal, and became the Emperor Pedro. There is an excellent and well-kept museum here, displaying among its treasures the pottery and the simple adornments of the indigenous folk, whose liquid, tripping names the Paulista affectionately retains, but whose faces have vanished from the streets of São Paulo for ever.

It is worth while to climb to the top of the Ypiranga hill, however deep the sticky red clay may be; from its summit you will get a surprise, whether you have never seen the city before, or if you have not visited it for a few years. To-day it spreads like a pink and white flood, massed tremendously upon the open plateau, and with plenty of room for new growth. This is already the third city in size of South America (with Buenos Aires first and Rio second); with the United States shutting doors against newcomers, and the tide turned more strongly southwards,



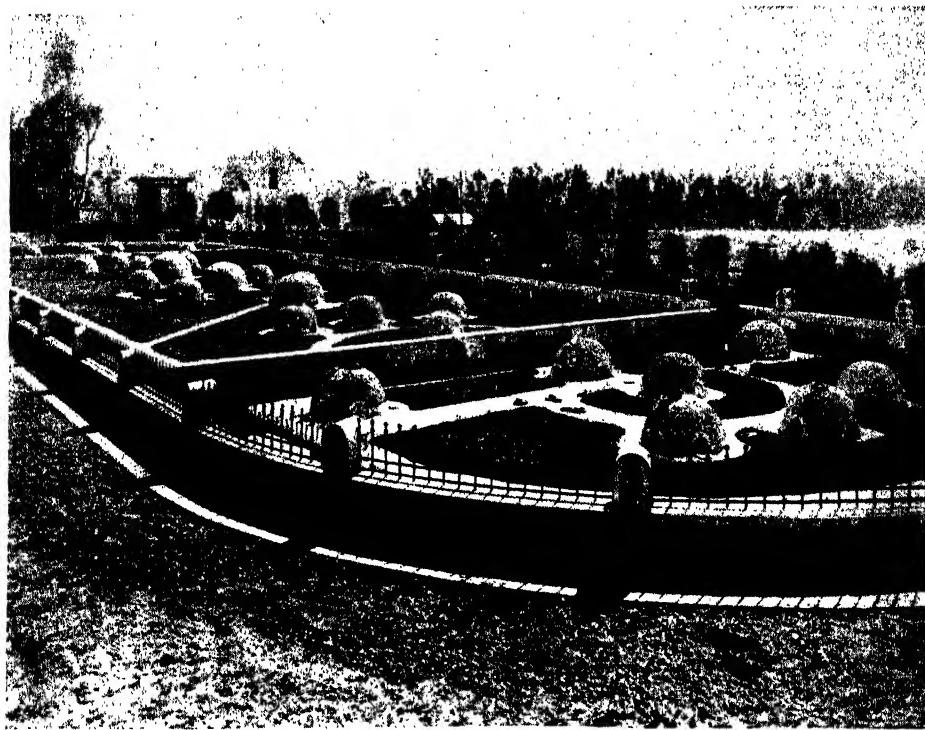
R. M. S. P.

RUA DIREITA IN THE BUSINESS QUARTER

From the Largo da Sé Rua Direita leads towards the viaduct which spans a valley formerly filled by tea plantations. Some of the streets in the business area are so narrow that traffic is only permitted to travel one way

industrial São Paulo is likely to receive, in her well-managed and comfortable immigrant hostels, as many workers as she wants.

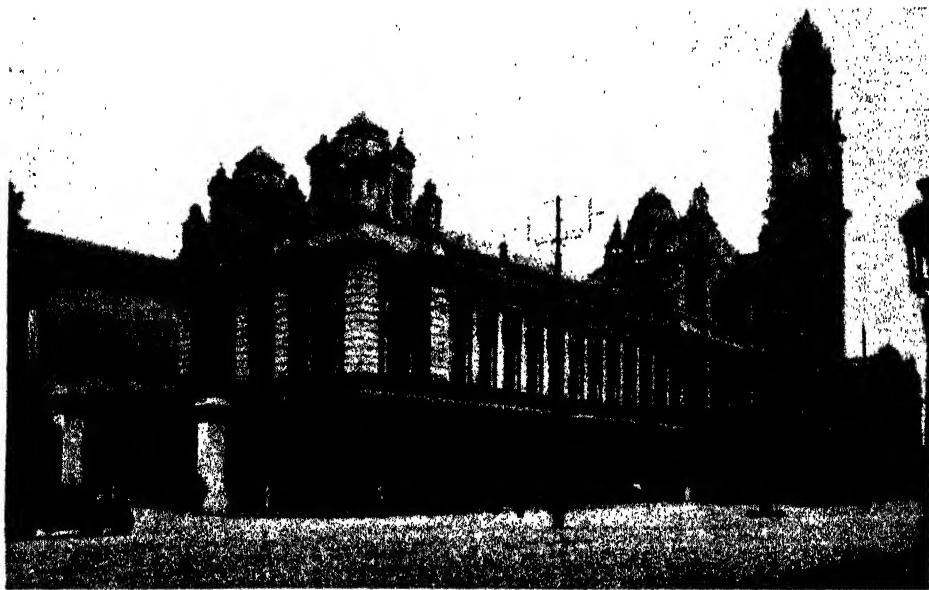
Out in yet another new district, the Jardim America, you will find the cheerful villas of the English and North American colonies, where lands are laid out and houses built by an up-to-date company; fine roads lead out to more distant suburbs, such as São Bernardo, and to reach these residential districts the city possesses more than 6,000 motor-cars, as well as street-car services. Over there you can see one of the smartest hotels standing behind that gorgeous edifice, the Municipal Theatre, overlooking the Anhangabahu valley.



B. N. A.

ENCLOSED STOCK-YARD OF A SNAKE FARM NEAR SAO PAULO

At Butantan, five miles from São Paulo, an institute has been founded for the preparation of antidotes to snake-bites. The serums are prepared from the blood of horses which have become immune by having small doses of poison injected into them. The snakes are kept in the dome-like houses and when wanted for venom they are dragged out with a pole such as the man is holding



B. N. A.

GREAT CLOCK-TOWER OVER THE LUZ STATION AT SAO PAULO

From São Paulo railway lines radiate into the interior, but there is only one line of double tracks running towards the sea. The Luz station faces on to the Rua José Paulino opposite the public gardens and is one of the finest stations in South America. Rio de Janeiro, which is not much more than 200 miles east of São Paulo, can be reached in about ten hours

now bright with terraced gardens; and the railway station, the Estação da Luz, is one of the handsomest to be found in any country.

São Paulo grudges no outlay for fine equipment worthy of her present and future status, and her civic fathers are always looking ahead. The maker of modern São Paulo, the man who started rolling the ball of city equipment, was Dr. Antonio da Silva Prado, born in 1840, a cabinet minister when Brazil was an empire, a grower of coffee upon an enormous scale, connected with railroad, packing-house and many industrial enterprises.

With all the rising tide of city growth, São Paulo has been able to keep but few signs of her colonial days; you will not find without difficulty the one-floor buildings, roofed with red tiles, of a past century. Yet the city has a history of four hundred years.

Portugal sent Martim Affonso de Souza to settle and divide Brazil in 1531. He landed near the present Santos, built a few huts, left a handful of colonists; and these would have had short shrift from the Tamoyo Indians, but for the assistance of one João Ramalho, a Portuguese castaway, who had mated with a daughter of an Indian chief and had already raised a big family of hardy mixed-bloods. Ramalho and his new tribe lived on the uplands, near São Paulo city, and here in 1554 came the good Father Anchieta, "Apostle of South America," founding São Paulo de Piratinha and inviting settlers to come and occupy the site.

The Jesuits were driven out by the "mamelucos," the graceless descendants of Ramalho, who presently began raiding the interior tribes of their Indian kin to supply workers for Portuguese plantations. They were the first of the



L. E. Elliott

RAILWAY LINE BETWEEN SAO PAULO AND THE PORT OF SANTOS

Santos lies on the Atlantic sea-board about 45 miles east of São Paulo and owes its position as a great port to the constant stream of coffee which flows down the railway from São Paulo. The line ascends about 2,500 feet between the two cities and passes through a series of short tunnels at the point where the Serra do Mar, the barrier mountains, descend steeply to sea-level

celebrated "bandeirantes" of São Paulo, whose expeditions remain one of the wonders of history, without equal in boldness and accomplishment. Beginning about 1562, when the first "bandeira" left São Paulo on a slave raid, these entries into the wild "sertão" went on until about 1735; expeditions went out like armies, sometimes remaining in the interior for years, foraging and finding food as they went along.

From Banditry to Coffee-picking

Among their exploits they practically cleared South Brazil of Indian tribes; wrested Rio Grande do Sul from the Spaniards; went across the river Paraguay into the Chaco; crossed into Bolivia and into Peru—where one of these explorers reached the Pacific, and eventually returned to São Paulo by way of the Amazon. They explored, and secured to Brazil, the Goyaz and Matto Grosso regions; destroyed the fourteen great Jesuit missions of the Paraná; founded towns in the vast interior; and discovered the rich mines of gold and precious stones in the state of Minas Geraes.

The town of São Paulo was, until the middle of the eighteenth century, little more than a jumping-off place for these incredible expeditions; it was not given the rank of "city" until 1711, had no bishop before 1745, and only became the capital of the province in 1815, when it counted but 5,000 people.

Experiments in Immigration

About this time a planter of the district sent a couple of sacks of coffee to Europe, as an experiment—the shrub was being grown farther north. The red diabasic soil of São Paulo was found a splendid nurse for "café arabica," and over 1,000,000 sacks a year were being shipped by the middle of the century.

Dom Pedro, far-seeing, began to supplement slave labour with immigration from Europe, and colonies from half a dozen regions were tried. North

Italians stood the test most successfully, but he who doubts the suitability of the Paulista climate for other races to dwell in should see the polyglot press of São Paulo city.

To the rich South American, Paris is a second home. But it is to the credit of São Paulo that many of her wealthy sons have invested their coffee fortunes at home; by the end of the nineteenth century the city had a number of infant industries, as well as good transportation. But the factories languished until, in 1900, a carefully regulated protectionist tariff for their benefit was brought into being.

Then a magic change took place; industry flourished, until to-day there are about 8,000 large and small mills, with an annual output of goods worth about £30,000,000 sterling. When packing-houses (frigoríficos) were added between 1914 and 1916, to Paulista industries, south Brazil began shipping chilled meat to Europe in competition with North America and Argentina.

No Poor and No Slums

It is impossible to describe São Paulo without dealing in statistics—on every hand the evidences of growth and frank prosperity meet the eye, and this prosperity insists upon measurement. One cannot avoid murmuring facts and figures—of the fifty tree-bordered avenues of the city; 120,000,000 passengers carried in one year by the street-cars; the cost of the Post Office. But all this might be true and yet São Paulo might not be the pleasant, cheering city that it is.

No one is poor; there are no slums. Everyone is working with the hope of making money as his neighbour made it. The air is crisp, clear, frequently cold; a climate where hard work can be accomplished by white races has been one of the greatest attributes of São Paulo. It is, too, a city that claims allegiance; it does not take more than three years to turn anyone who takes up his abode there from a foreigner into a proud Paulista.

SARDINIA

Rocky Island-Province of Italy

by E. G. Harmer

Writer on Anthropology and Archaeology

THE island of Sardinia, which lifts its rugged contours out of the western Mediterranean deeps, is poised like an oblong shield over the distant heart of Italy. Companionship by the French island of Corsica, which formed a head to its torso before the straits of Bonifacio in geological time severed them in twain, it lies about 130 miles from nearest Italy on the one side and nearest Africa on the other. Including its two score isles and islets, from San Antioco in the south-west round to Garibaldi's home at Caprera, it embraces 9,300 square miles.

Of the whole land area three-fifths are mountainous. Upon the eastern half are piled jumbled masses which culminate in the abrupt slopes of Gennargentu—the Gate of Silver—out of which emerges the cloud-capped Bruncu Spina, more than 6,000 feet high. The north-west region of the Nurra, and the treeless ranges to the south of it, are wholly volcanic, reaching up to the extinct cone of Monte Urticu, 3,448 feet high, within whose crater nestles the placid village of San Lussurgiu.

Points of Surface Configuration

A trench-like plain, low, treeless and malarious, with saline lagoons at each extremity, extends from Cagliari across to Oristano and—emulating the great Majorcan plain of Palma—is tilled like a garden. Of Sardinia's 167 water-courses the Tirso, with its 90 miles, ranks as the longest, accompanied by the swifter Flumendosa, which here and there, when in spate, rushes through wilder and more precipitous gorges. All are unnavigable, all arid in summer, save only the sluggish stream which debouches beneath a stately Roman

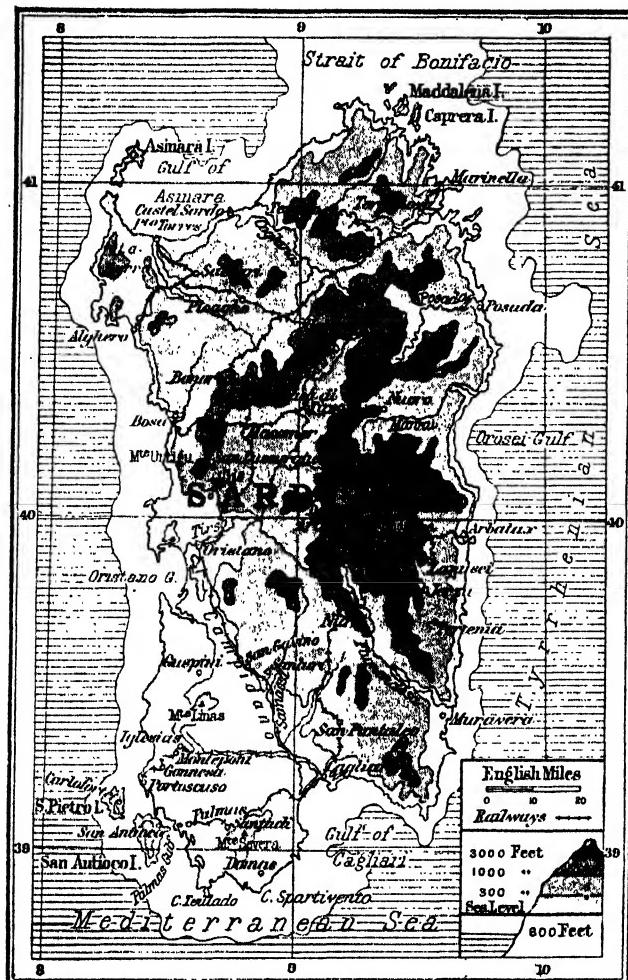
bridge at Porto Torres. The coast, high and rocky round the north-east, with scenery unsurpassable, sinks to flatter contours at the opposite corner, where the Gulf of Palmas vies with Cagliari for the primacy of Mediterranean harbourage. It was Palmas which Nelson described as "the finest roadstead I ever saw."

Plants Peculiar to the Island

The temperatures are more extreme than on the mainland. Snow lies on the Gate of Silver through half the year, but the coast temperatures rarely descend to zero. Two days in seven are wet, but not in the droughty summer, when 90° F. and even more may be recorded for weeks together. Great marshes and land-locked lagoons, with their miasmatic vapours, tend to perpetuate the febrile conditions from which the island has always suffered.

Fierce November tempests prevail in some regions, with the dreaded mistral in the spring, and vegetation is checked by the vernal chills. The traveller who spends a couple of months before mid-summer in the uplands stores up agreeable memories; he whose experiences in the plains are longer alludes to Sardinia's climate with more reserve.

The island vegetation comprises an indigenous flora, overlaid by the age-long effects of human action. Some thirty-eight plant species are found in Sardinia alone, and almost as many more only here and in Corsica. The greater forest trees, introduced from time to time by Mediterranean wanderers, have settled down with the still earlier comers into well marked zonal habitats. Cork-trees, oaks, beeches, walnuts and chestnuts clothe the uplands,



THE MOUNTAIN FASTNESS OF SARDINIA

wild olive, lentisk, myrtle, broom, arbutus and willow the lower slopes, down to the century-old olives of Sassari and the glassworts and sea-lavenders of the coastal marshes. Everywhere the prickly pear assimilates the village scenery to that of the whole Mediterranean basin.

Wild mouflon, with their shaggy, goat-like fleeces, whose primacy in time is attested by prehistoric figures, still roam in herds round about Gennargentu, as you climb from Desulo or Aritzo. The stag is hunted round Nuoro and Lanusei. Wild boar and hares, with great birds of prey, have been here since history began, and no summer passes without the advent on

the southern lagoons of flamingoes from the lakes about Bizerta.

The rock structure begins with an overflow into north Sardinia of the granites, schists and other primary rocks of the Corsican region, followed by an eastern backbone of gneisses, granites and slates, a western framework overlaid by triassic and other secondary limestones, and between them a volcanic outflow, effected in tertiary times. Of the later sedimentary deposits the most prevalent are the miocene, rich in lignites at Sassari, and richer still round the Iglesias mines. Porphyries, alabasters and marbles would be worked with greater vigour were transport improved. The ore-bearing wealth which aroused the cupidity of Mediterranean mariners in the early age of metals has been exploited under varying conditions from that day to this.

In his inmost heart the Sardinian is not fond

of the sea. You may encounter him fishing for trout and eels in the Flumendosa, or potting lobsters in the bays, but it is mainland Italians who cull the larger harvest of the sea. From April to July the west coast bays from Porto Torres down to Carloforte are haunted by Genoese boatmen in quest of the tunny, which is cured with the salt produced from the local lagoons. Neapolitans vie with their northerly neighbours in the collection of coral; others come for sardines and anchovies.

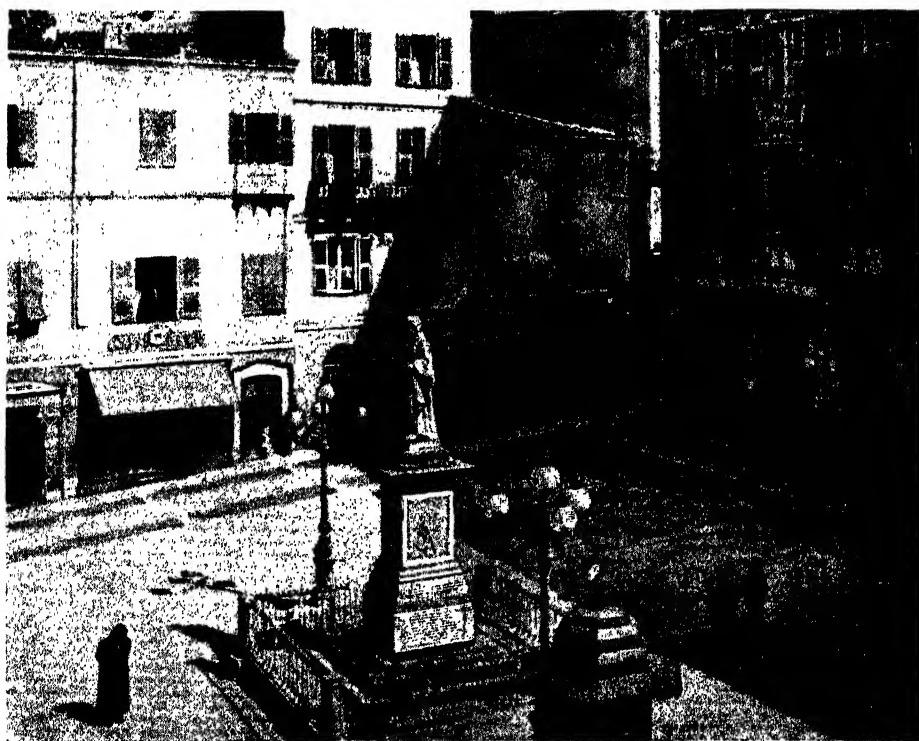
The arable plains, once famed as a Roman granary, are hampered by the sparser population of to-day, and by a system of small holdings, in sharp contrast with the large Sicilian estates.

Of the agricultural population one in three farms his own land or holds on fixed tenure. The largest slice of the cultivated region is devoted to nomadic pastoralism. The herdsman, clad throughout the year in his fleecy mastruca, haunts the summer uplands and the winter plains. Pasturage is poor, and the native oxen seldom exceed 700 lb. apiece, while the milch kine yield poorer milk than the goats.

Sheep, goats and cattle may run into 10,000,000 head all told. Horses are raised. Poultry do well in the north, and the oak forests and beanfields secure for the pig a paradise of contentment. The handling of timber for houses and ships, the preparation of cork, tanning stuffs, acorns and charcoal may yield £300,000 a year, but the wanton denudation of the timber regions, with no thought of reafforestation, has brought much desolation in its train.

The cereal output, dependent upon primitive husbandry, is declining. Even wheat may yield a no greater crop than 3,000,000 bushels, although sometimes it is half as much again, and used to be far more. Of the 500,000 acres under cultivation the bulk are devoted to the raising of pulses, lucerne and other fodder plants. Potatoes grow well in the uplands, tobacco and some cotton in the south, while the saffron of Sanluri is famed far and wide.

The wine harvest once reached 60,000,000 gallons, but it is now barely one-sixth of that record, and the olive oil is half as much again. The Milis oasis, with its 300,000 orange and lemon trees, furnishes citrus juices. Ox-wains with solid wheels, water-wheels, whose earthenware pots are turned by blind-folded donkeys, recall immemorial methods of transport and irrigation in the basin of the midland sea.

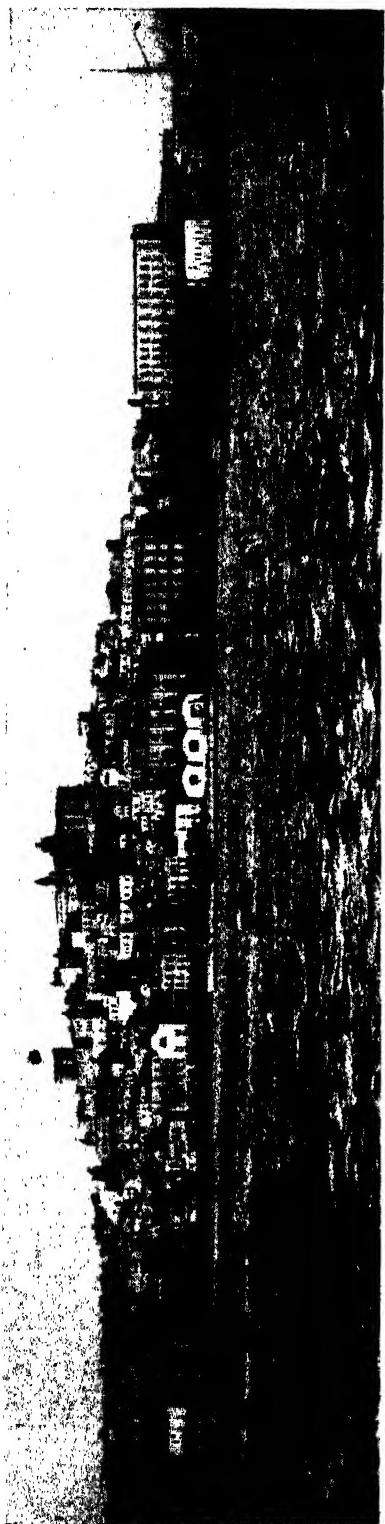


E. N. A.

SASSARI'S STATUE OF HER GREAT TEACHER OF COMMERCIAL LAW

Next to Cagliari, Sassari ranks as the chief town in Sardinia. A well-built town, attractively set among olive and orange groves, it has some interesting medieval architecture, including a twelfth century cathedral and a fourteenth century castle. This statue in the Piazza d'Azuni is of Domenico

Alberto Azuni, the jurist and legal historical writer, who was born at Sassari in 1749



Mansell

FINE SITUATION OF CAGLIARI, SARDINIA'S SEAPORT CAPITAL ON THE SOUTHERN COAST

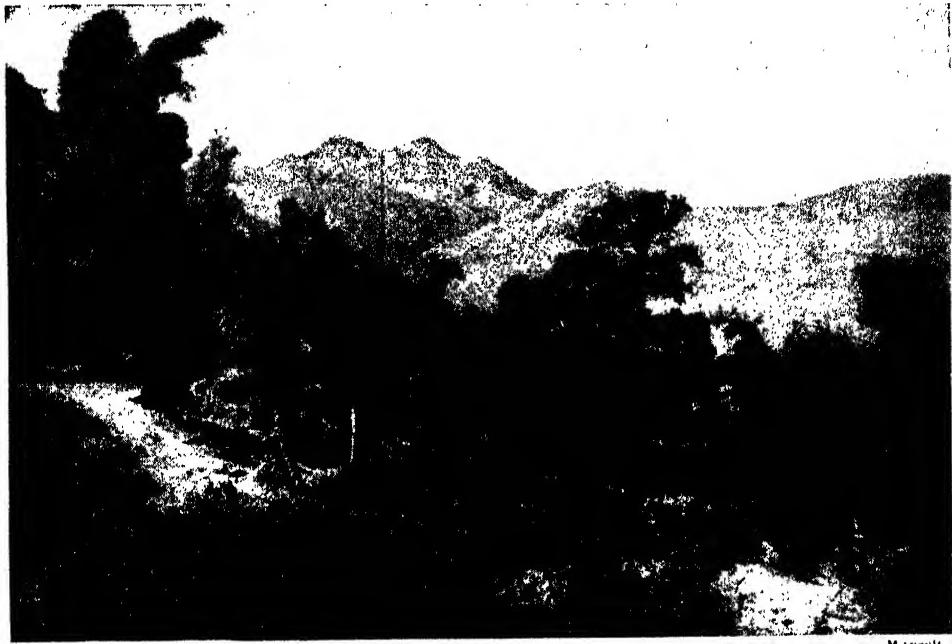
On a large bay off the south coast of Sardinia lies ancient Cagliari, capital of the island. The old section is spread about the summit of a hill 300 feet high, while the newer quarters stretch down the steep slopes to the shore. The well-equipped and well-protected harbour accommodates vessels drawing 25 feet.

The great deposits of metal-bearing ores are worked under modern conditions, mostly under foreign control, by upwards of 20,000 men, half of them operating underground. Good machinery is turned out at Cagliari, and there are hospitals, schools of mines and welfare centres at Monteponi and elsewhere. Many hundreds of mining concessions have been granted from time to time, but many of them have never paid. One-sixth of them, mostly for silver-lead, zinc blende and calamine, lie around Iglesias. Here much ore is smelted, thanks to local lignite deposits, aided by an annual importation of 20,000 tons of British coal. Antimony and manganese are also mined, and there is more iron than copper. Carloforte alone sends away 120,000 tons of ore annually, mostly to Belgium and France.

The greater number of the 35,000 hands employed in manufacturing industries—clayworking, utensils, furniture and the like—are engaged in handicrafts, the total power installed being but 13,000 horse-power.

The roads, some 3,000 miles of them, fade in the mountains into innumerable goat-tracks, where horseback provides the only comfortable travel. There are daily diligences on the highways, 600 miles of railway track traverse the greater valleys, and motor services are expanding. Sea communication is maintained daily with Civitavecchia, and there are weekly services to Naples, Genoa, Palermo, Tunis and Ajaccio, besides less frequent runs from port to port. Electric trams and motor-cars, with steam trams into the Campidano, give Cagliari the air of a European city.

Scattered throughout the land, mostly in rocky situations unsuited for husbandry, may be seen three or four thousand rude stone conical towers, here called nuraghi. They were set up by early Bronze-age immigrants for family strongholds, and in some instances are still in occupation. They are an unceasing allurement to the traveller, and their companion



Menzell

MONTI DEL GENNARGENTU, SARDINIA'S HIGHEST MOUNTAIN RANGE

The beautiful island of Sardinia boasts a well diversified landscape. Mountainous in the main, with considerable forestland and much stony and unproductive soil, with many upland plateaux and the vast fertile plain of Campidano, this rugged island possesses a wild beauty. The loftiest mountain group is the central chain, the Monti del Gennargentu, whose culminating peak rises to 6,016 feet.



Menzell

ISLANDERS OF SAN PIETRO IN A STREET OF CARLOFORTE

Carloforte, the capital of the small trachyte island of San Pietro lying off Sardinia's south-western shore, was founded in 1737 by Charles Emmanuel III. and peopled by Genoese settlers, among whose present-day descendants the original dialect and costume still prevail. Delightfully picturesque scenery is found along the fissured coast and in the north are the interesting tunny fisheries.

structures, giants' tombs, dolmens and megalithic pillars, bear witness to an age of great prosperity.

For the most part the peasantry inhabit rectangular houses, whose primitive aspect is often pleasing. In the Barbagia villages are encountered congeries of whitened or blue-washed houses with ruddy roofs, one-storeyed, chimneyless. In the Campidano they are of sun-dried brick, in the eastern uplands of granite or basalt blocks, in the volcanic region of lava debris.

Aritzo is a nest of alpine chalets built of slate with timbered balconies, and no better homesteads could be desired than those of the nomad shepherds of Fonni, Sardinia's loftiest eyrie, 3,277 feet above the sea. Even in the marshy environs of Oristano there are rows of mud-brick hovels, hedged about with prickly pear and occupied by potters, while until of late no country house but had its donkey-driven corn-mill.

Of the larger townships, Alghero betrays in its Catalan towers and bastions the persistence of an old immigration. Sassari's spacious squares and lofty granite dwellings, public gardens and boulevards, embrace a population of 43,000. Cagliari itself, with 62,000, still remains at heart a medieval stronghold. Unforgettable is the view from the Bay of Angels of the grim castello on the heights, with the Pisan towers of the Elephant and San Pancrazio at south and north. Out of its canyon-like streets, tortuous and steep—a welcome retreat from the biting January winds—people of all

ranks pour forth on hot summer nights to pace the Bastione San Remy.

So inaccessible a land has enjoyed marked freedom from foreign intrusion since history began. Those short, dark, long-headed Sards who first came, it is thought, from neolithic Africa, followed by a second wave of Bronze-age husbandmen and herdsmen, account largely for the physical and mental make-up of the modern population. The people belong to the Mediterranean race, akin to the Spanish strain.

Phoenician colonies, followed in turn by Roman, Byzantine and Saracen, left behind them, century after century, material witnesses of their sojourn, but hardly affected the character of the race. The geographic environment is responsible for much of the gravity, often verging upon melancholy, the distrust of change, the archaisms of the local dialects, the insouciant attitude to the morrow, the kindly courtesy, the strong sense of hospitality, the respect for women, the passion for freedom.

Lethargic and superstitious in the remoter districts, in the greater towns the new generation tends to ape European dress and deportment, to substitute the two-step for the ballo tondo, and the accordion for the launedda or pan-pipes. But in the mountain regions the traditional costume, the goatskin mantles of which Cicero wrote, the leather collettus, the bunchedy trousers, the Phrygian caps, the open-bosomed bodices and be-jewelled skirts of the women, appear in all their variety at the village festas.

SARDINIA : GEOGRAPHICAL SUMMARY

Natural Division. Fragment of the ancient crust block, most of which has sunk beneath the Tyrrhenian Sea, and round which curved the Apennines.

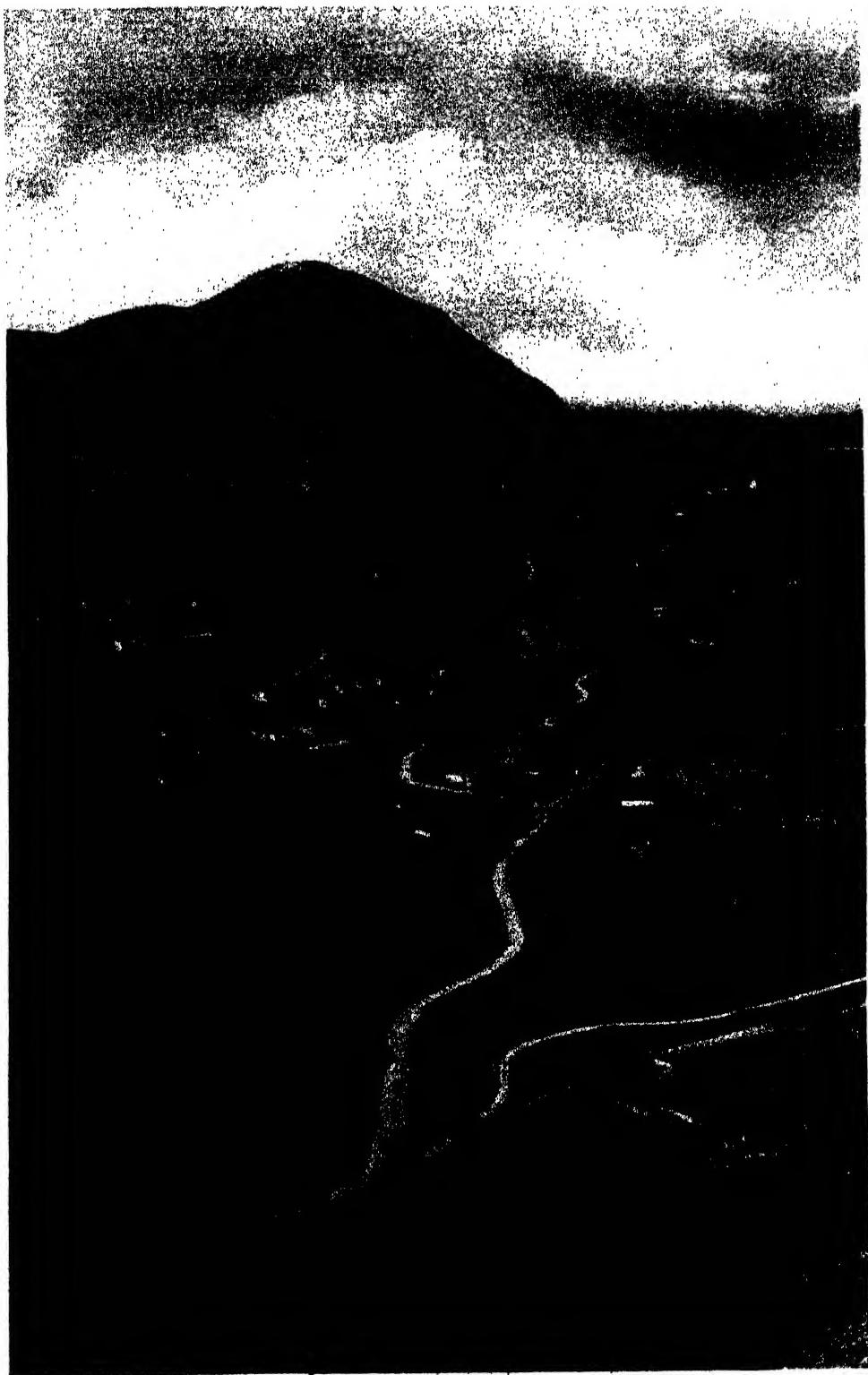
Climate. Mediterranean in type, with intensely hot, dry summers and harsh, wet winters. The mistral.

Vegetation. Mediterranean in type, arranged in zones according to elevation. Maquis. Scanty pasture.

Products. All have declined in relative importance as the resources of the rest of the world have been tapped, and this decline has been accompanied by an

absolute decline, e.g. in wheat. Olives, grapes, oranges, lemons, saffron, tobacco, fodder plants. Iron ore (exported), copper, manganese, silver-lead, zinc. Sheep and goats under nomadic conditions.

Outlook. One of the few examples of an island people not interested in fishing. Not seafarers, but primarily mountaineers, the Sards maintain existence strong in old traditions and customs, and plod along little disturbed by the stupendous changes which have occurred since they were of greater importance to the rest of the world in Roman times.



Manoil

SARDINIA. Across the valley below Monteponi are some mine workings and a road winding over a shoulder of the hill to Gonnese



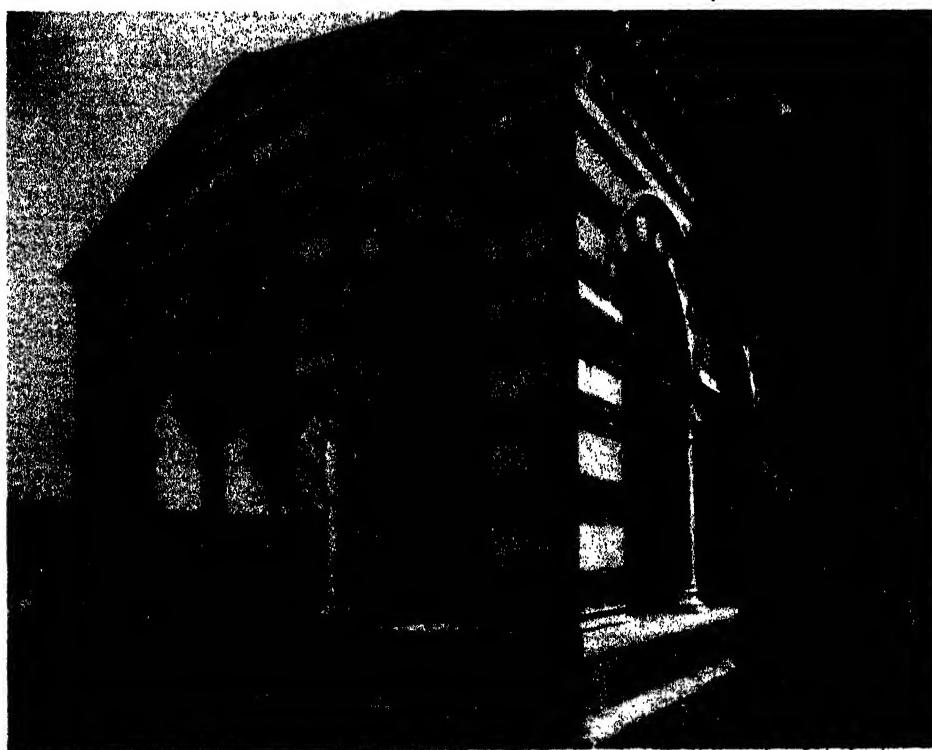
SARDINIA. About six miles off the south-west coast of Sardinia is the island of S. Pietro with its fissured
track-like cliffs. In the spring enormous shoals of tunny appear, harried by hungry sharks and eager fishermen

W. Russell



In Sassari the peasants fill their wooden casks with water from the ornate Fontana del Rossello on which is a statue of S. Gavinus

Mansell



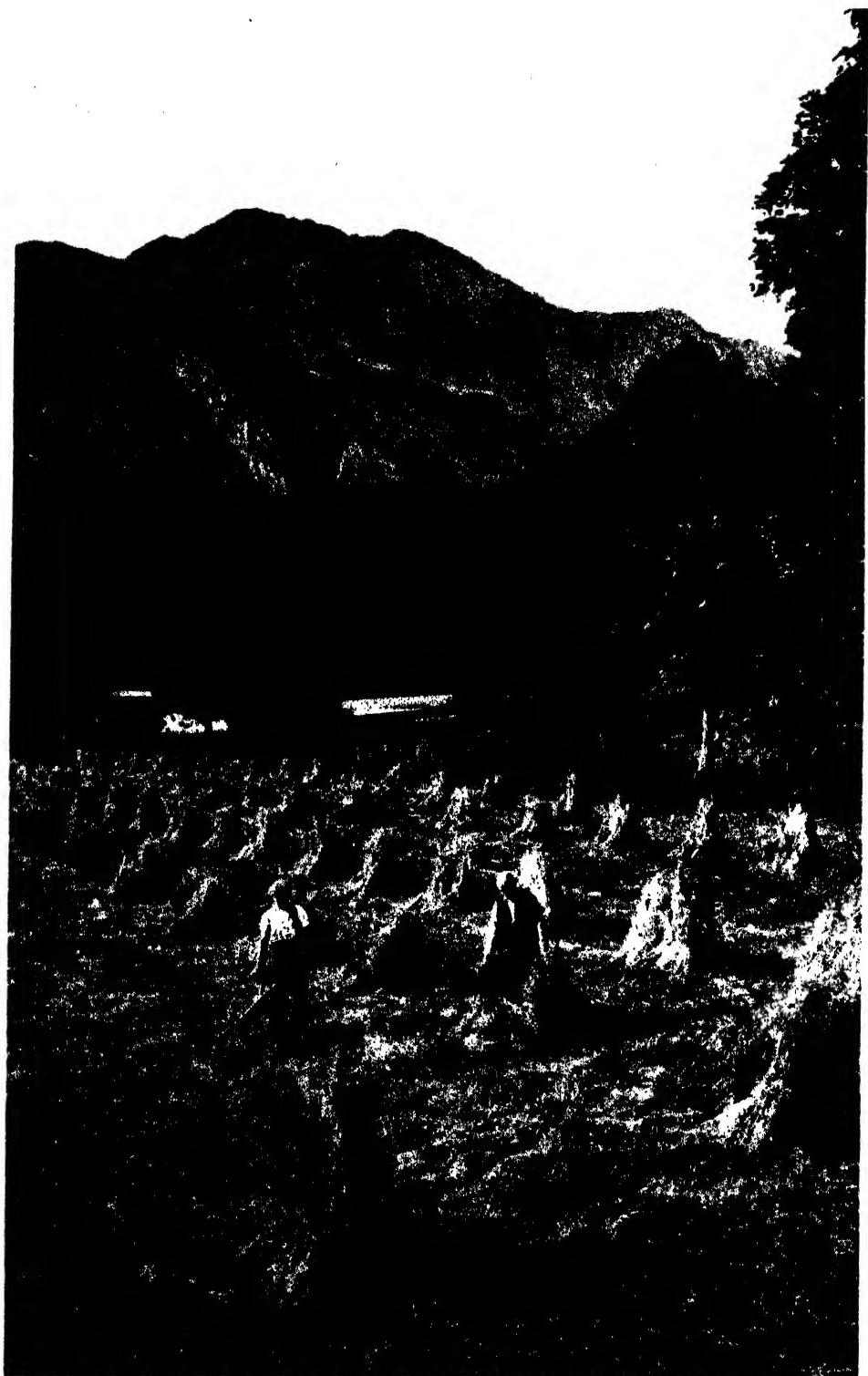
SARDINIA. Near Ploaghe are ruins of the Romanesque abbey of Trinità di Saccargia, built of dark lava-blocks and limestone

Maperil



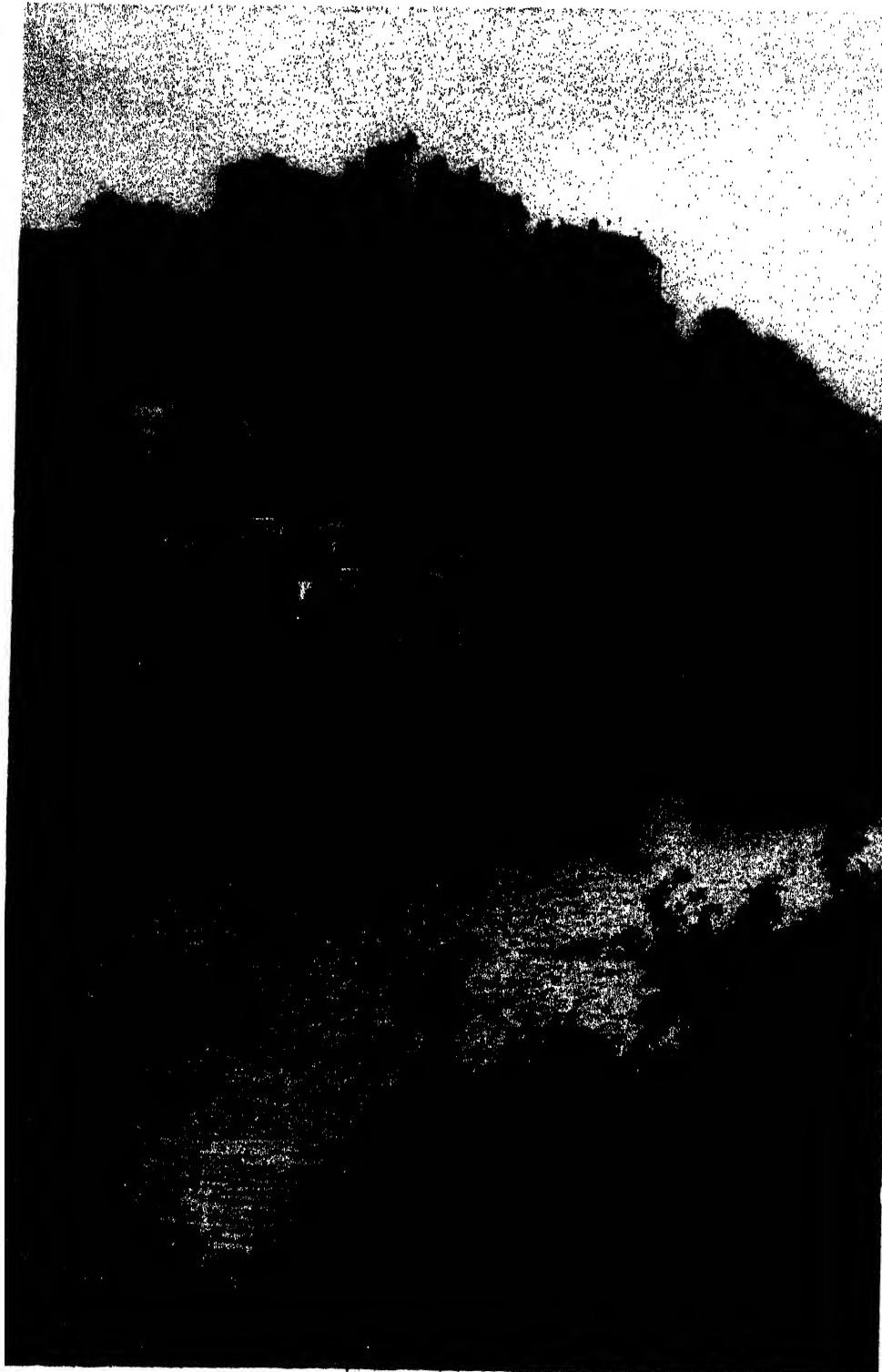
SCOTLAND. Ben Venue looks down 2,400 feet through the morning mist upon still Loch Achray, one of the lakes in the Trossachs

Donald McLeish



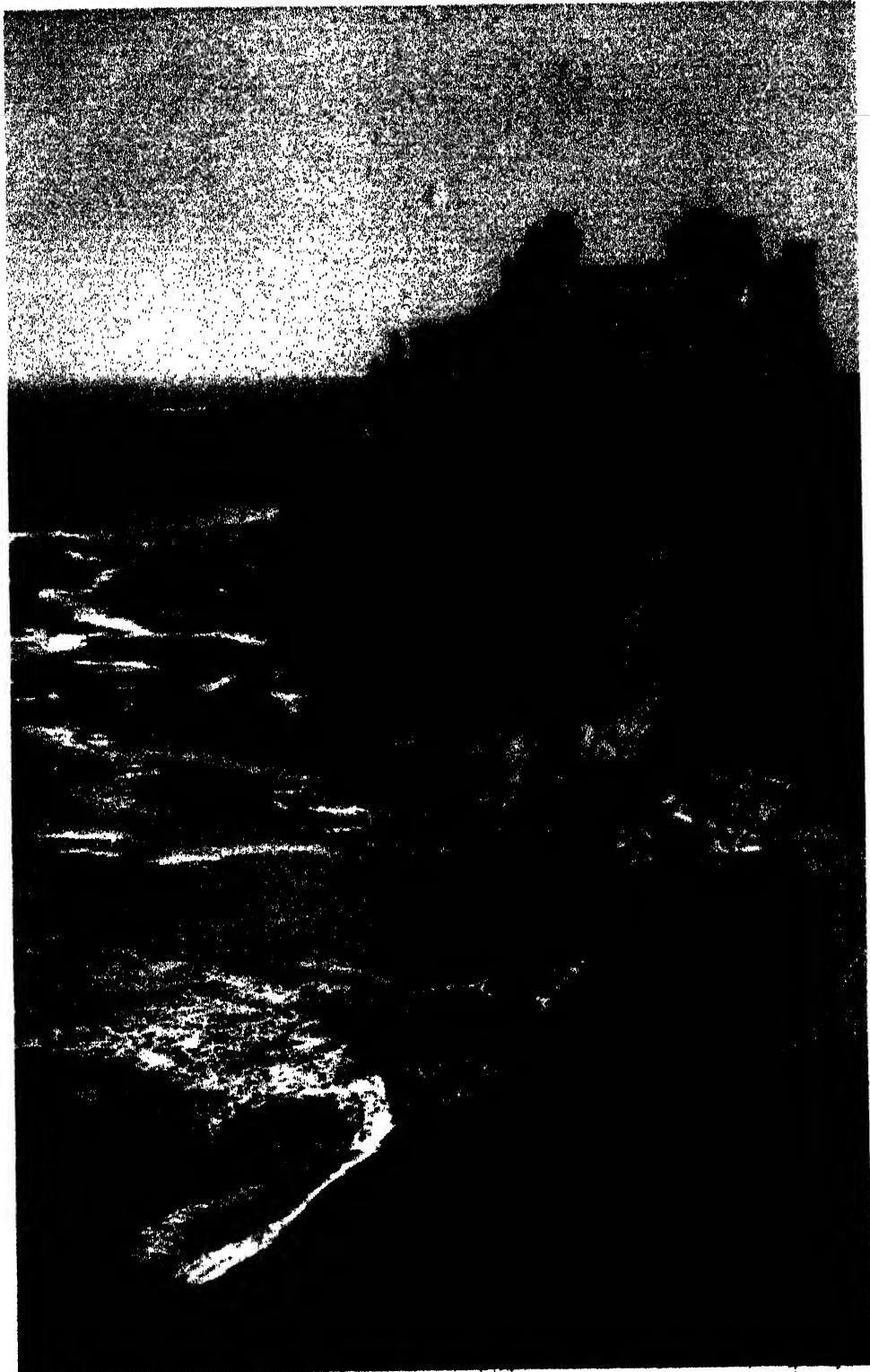
Donald McLeish

SCOTLAND. Stripped of its soft veil, the rugged form of Ben Venue rises stern and grim above trees and yellow cornfields in the vale



SCOTLAND. *Stirling Castle, upon a mighty crag, for centuries kept the road to the Highlands. Seven sites of battlefields surround it*

Donald McLeish



Donald McLeish

SCOTLAND. Time has stormed proud Tantallon, impregnable
castle of the Douglases on a cliff moated by the cold North Sea



SCOTLAND. Two thousand feet below the aeroplane the mosaic of Kinross is menaced by the dark hosts of the gathering storm

Capt. A. G. Buckham

SCOTLAND

Scenes of Industry & Far-Famed Beauty

by A. MacCallum Scott

Writer and Authority on Scottish Affairs

SCOTLAND is the northern part of the island of Great Britain. The name "North Britain" has been used to a considerable extent, and there are still some people who place "N.B." on their notepaper.

The "North British Daily Mail" and the North British Railway were familiar titles a generation ago, but they have both now disappeared, absorbed in larger combinations. Even the Post Office officially insists that "N.B." stands for New Brunswick.

The present political frontier between Scotland and England crosses the narrow neck of land from the Solway Firth to the mouth of the Tweed, a distance of about 70 miles. It might have been thought that the narrower neck between the firths of Clyde and Forth would have afforded the natural frontier, and indeed it was long a matter of doubt whether the territory between these two lines would ultimately belong to England or to Scotland.

Struggle for the No Man's Land

The Romans were confronted by the same problem. Their failure to colonise Scotland was a recognition of some essential difference from England. In Hadrian's Wall they first drew their frontier from the Solway to the Tyne, near the present Border. A century later they sought to push their frontier north to the Forth and Clyde line, but the Antonine Wall which they built there was never more than an advanced line. The real frontier was Hadrian's Wall in the south. Between the walls was a kind of buffer territory.

In the wars for national independence it was this debatable land between

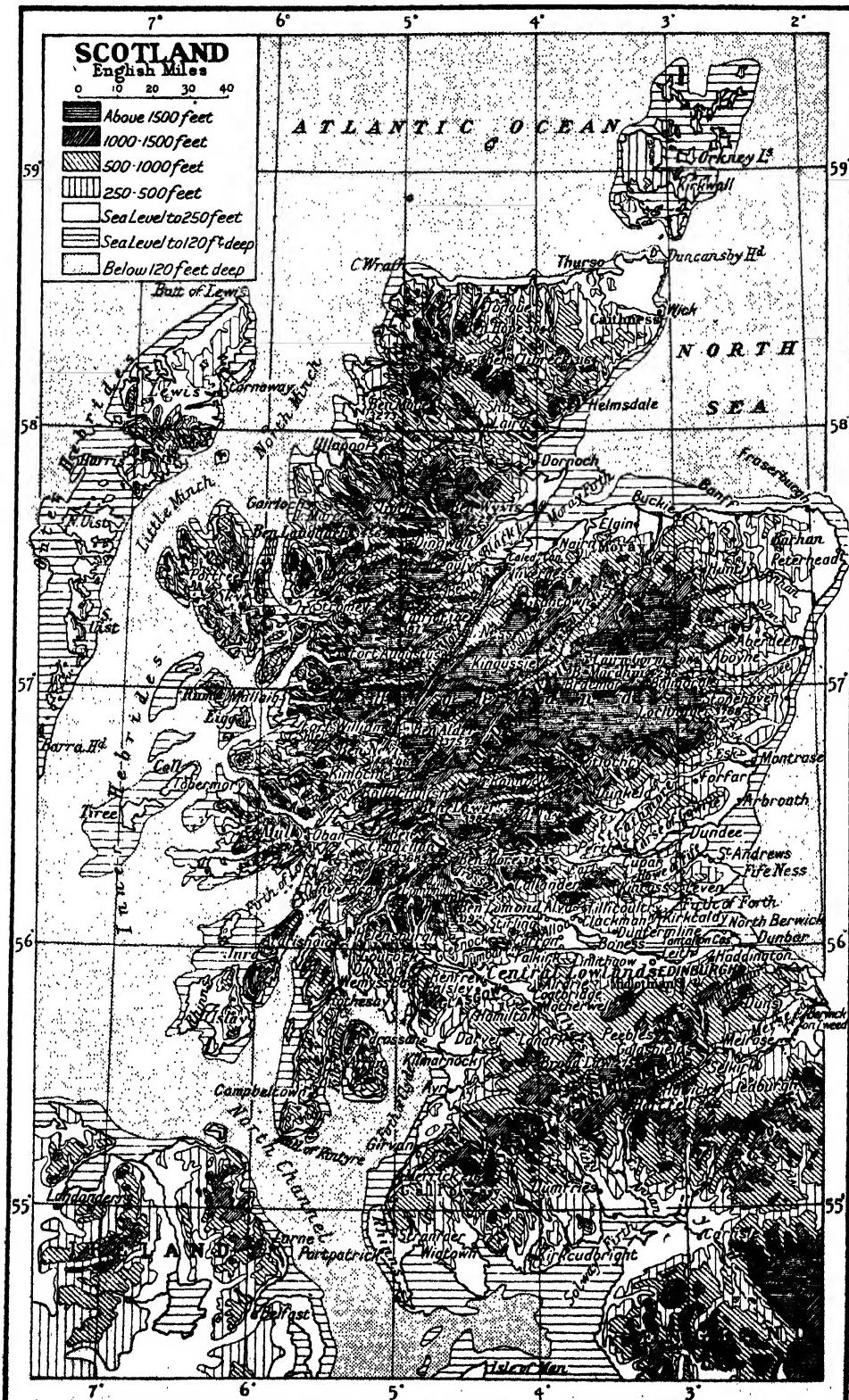
these two lines which was the determining factor in the political destinies of the island. The fertile plains and valleys of Ayrshire, Clydesdale, Annandale, Tweeddale and the Merse, the Lothians and the Carse lands south of the Forth were essential to nourish a people strong enough to resist the aggression of England.

The Great Midland Valley

The highland fastnesses were a kind of hinterland to which the hard pressed Scots might retreat, but alone they did not contain the resources upon which a separate national life might be founded. If England had won the southern counties the Highlands could not long have retained their independence. With her feet firmly planted in the southern counties Scotland remained a unit.

In popular phraseology the Forth is the dividing line between the Highlands and the Lowlands. But such rough-and-ready generalisations are deceptive. There are extensive highlands in the south, between the Forth and the Cheviots, great masses of hills with remote valleys and ancient solitudes. And there are true lowlands all up the east coast and round the shores of the Moray Firth, as far north as Caithness.

If one specific tract might be marked out as essentially lowland it is the great midland valley which runs from south-west to north-east, from the coasts of Ayr and Renfrew to the coasts of the Lothians, Fife and Forfar, comprising the Straths of Clyde and Forth, the Carse of Gowrie which runs along the northern shore of the Firth of Tay from Perth to Dundee, and the broad Strathmore at the foot of the



SCOTLAND'S TANGLED HILLS AND FIRTH-SCORED COASTS



Captain A. J. Buckham

HOW THE FORTH WINDS ITS SERPENTINE WAY THROUGH STIRLING

The total length of the Forth down to Alloa is 53 miles, and the river is navigable up to here for vessels of 300 tons and up to Stirling for those of 100 tons. Through the Carse of Stirling the Forth is remarkable for its sinuous course, its fantastic windings being seen to advantage at this height of 1,500 feet. In the left foreground the historic Stirling Castle rises on its high crag.

Grampians from the Tay to Forfar. This lowland tract has been formed by two geological "faults," or breaks, in the earth's surface, which run right across country. The northern one follows a line from Helensburgh, on the Firth of Clyde, to Stonehaven on the east coast, a few miles south of Aberdeen. This is the true "Highland Line." The southern one follows a corresponding line from Girvan, on the Ayrshire coast, to Dunbar, south of the entrance to the Firth of Forth. Between them the earth's surface has subsided, leaving on either side the elevated masses of the Highlands and the Southern Uplands.

The Highlands, again, are divided into two sections by another line of fault, of similar direction, from Loch Linnhe to the Moray Firth. This is Glen More, the Great Glen, occupied by

three narrow and deep lochs which have been connected to form the Caledonian Canal. But as this glen is a deep trench rather than a valley, it does not constitute any lowland territory or make any essential difference between the Highlands on either side of it.

All this country is a huddled mass of mountains and high plateaux, cut up by deep, narrow glens and high passes, approaching very close to the coast on the west, but allowing a fringe of lowland country of varying width on the east and north. The mountains are rocky and barren, but they afford some of the most picturesque scenery in Europe. The Trossachs, Loch Lomond, Loch Awe, the Caledonian Canal through Glen More, the valleys of the Findhorn, the Spey and the Dee, the Cairn Gorms and Lochnagar are famous resorts. The west coast closely resembles

the coast of Norway. The fjord-like firths run far into the land among the mountains. The rivers, with the exception of the Clyde, are short and fall rapidly, through narrow glens, from the heights to the sea. The numerous

the 3,000 feet level. They are rounded in their contours, and covered with grass from foot to summit, affording excellent grazing for large flocks of black-faced sheep. Heather also is common, but without the universal



Captain A. J. Buckham

HIGH TOWER OF THE WALLACE MONUMENT AT CAUSEWAYHEAD

Causewayhead is a very small village about a mile from Stirling on the road to Bridge of Allan. Upon the top of a wooded hill the Wallace Monument stands out conspicuously, as the photograph, taken from the air, shows. The tower was founded in 1861 on the anniversary of Bannockburn, and in it is preserved Wallace's sword. In the distance, on the left, are the Braes of Doune

islands of the Inner and Outer Hebrides, with the remoter archipelagoes of Orkney and Shetland on the north, also closely resemble the Scandinavian "Skjaergaard." Scotland, indeed, in these respects, might be a prolongation of the Scandinavian peninsula.

The Southern Uplands, though they can be sufficiently wild in their remote glens, have not the savage grandeur of rock and cliff which is characteristic of Highland scenery. In the north many of the mountains are over 3,000 feet high, some exceed 4,000 feet. In the south none of the peaks reach

dominance which it possesses in the Highlands.

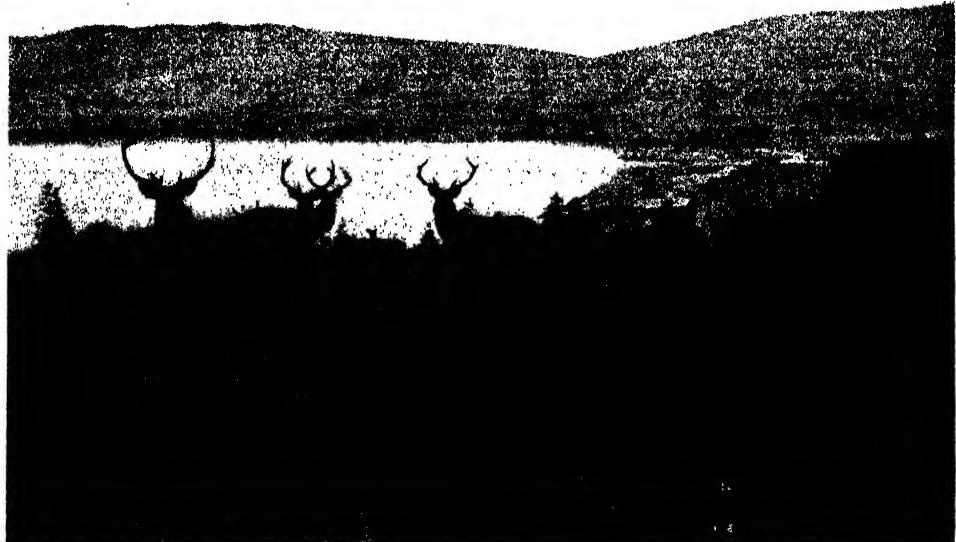
The geological structure of the country is specially interesting from the fact that the Highlands and the Outer Hebrides constitute one of the oldest land surfaces in the world. The mass of this territory is a vast expanse of crystalline rock of the Archaeozoic or earliest geological era, older than the oldest Palaeozoic rocks found in England. Obtruding through this surface are great patches of granite and basalt. Round about Ben More, in Sutherland, may be found rocks of the oldest fossil-bearing



R. K. Holmes

CALEDONIA'S MONARCH AMONG MOUNTAINS SEEN FROM CORPACH

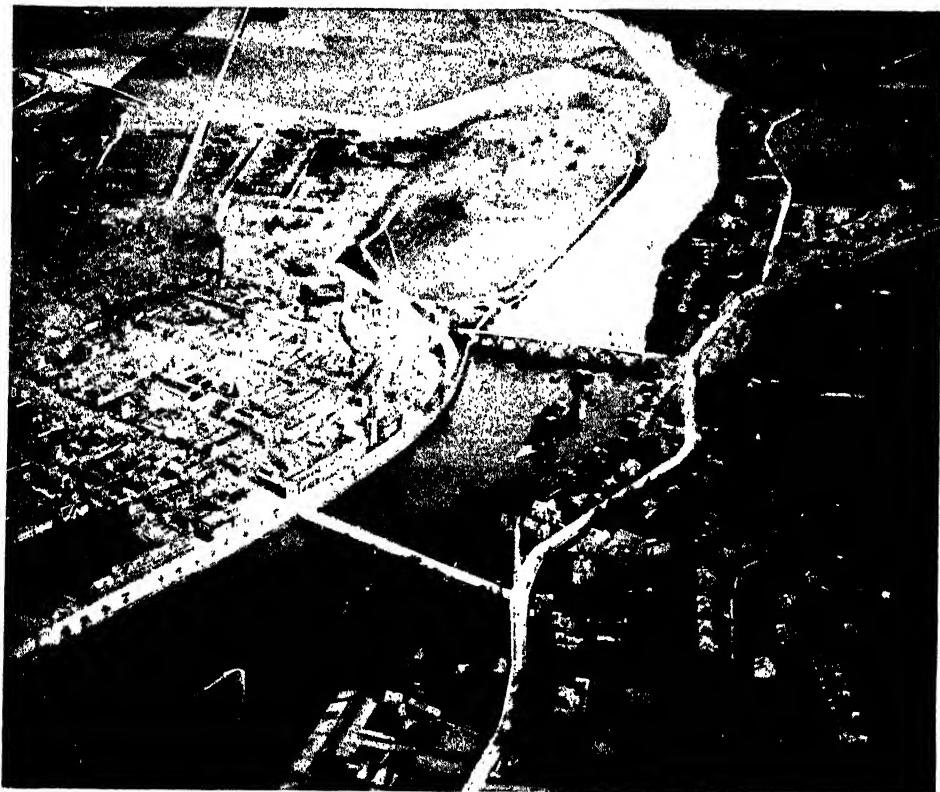
The highest mountain in the British Isles is Ben Nevis in Inverness-shire, which, rising five miles east-south-east of Fort William, has a height of 4,406 feet, with a base circumference of nearly 30 miles. Immense precipices, one dropping sheer 1,500 feet, are on its north and north-east sides, and in the deep fissures which scar the rocky walls snow lies throughout the year



G. Reid

HERD OF RED DEER UPON THE LOVELY ISLAND OF ARRAN

Arran is the largest island in the Firth of Clyde and has an area of 165 square miles. The northern portion is mountainous with many beautiful glens; in the south the hills are lower and the land more extensively cultivated. The game upon the island is carefully preserved and protected from molestation by visitors, and many rare flowers are to be found in the more secluded districts



Captain A. J. Buckingham

AERIAL SURVEY OF SCOTLAND'S FAIR CITY OF PERTH

Perth lies on the Tay, 48 miles by railway north of Edinburgh. Its unrivalled situation on the beautiful river, its wooded hills and the background of the Grampians have justly earned for the town its sobriquet of "Fair City." The Victoria Bridge, opposite South Street, connects Perth with Bridgend on the river's east bank; beyond is the fine, nine-arched Old Bridge, 840 feet long

sandstone known. This sandstone was deposited upon the shore of a continent in that ancient world which was just awakening to life but in which warm-blooded creatures had not yet appeared.

The Southern Uplands consist chiefly of rocks of the Upper and Lower Silurian series, which reappear again in the English Lake District and in the north-west of Wales.

In the great midland depression are found the later sedimentary rocks, old red sandstone, limestone, shales and the coal-bearing strata. There are also rich deposits of iron ore. In the lower courses of the Clyde, Forth and Tay there are considerable deposits of rich alluvial soil.

But for the Atlantic Drift, which brings the warm waters of the West Indies across the Atlantic to be a kind of radiator heating system to the British

Isles and Scandinavia, the climate of Scotland would be as Arctic as that of Labrador. While the Baltic, in the same latitude as Scotland, is frozen up for three months every year, snow will hardly lie more than a day or two on the west coast of Scotland.

England, especially in the south-eastern counties, is slightly more continental in climate, that is to say it has greater extremes of heat and cold. The average January temperature of the west coast of Scotland is actually 2° F. warmer than that of London. On the other hand the summer heats are less sultry, especially on the bracing east coast. The average summer temperature of Edinburgh is 6° F. less than that of London.

As regards moisture, however, the Scottish climate is extremely variable. The warm, moisture-laden winds from

the Atlantic drop their cargo on the western hills. The average annual rainfall for the whole country is 47 inches, as compared with 32 inches for England.

A large section of Ross, Inverness and Argyll has an annual rainfall of over 80 inches, the maximum being 160 inches on Ben Nevis. A narrow fringe along the east coast, from Berwick to Caithness, has under 30 inches of rainfall. The rest of Scotland varies between these extremes, the lowest rainfall on the west coast being over a small portion of Ayr and Wigton.

It is now easy to understand some of the strange paradoxes which Scotland presents to those who make its acquaintance for the first time as regards its natural products, its industrial wealth and its population.

The sources of wealth in Scotland are the coal and iron ore deposits, the zones of rich agricultural land and fine

pasture, and the inexhaustible supply of fish in the lochs, firths and open sea round her coasts.

The lower Clyde valley is the industrial centre of Scotland. Within a radius of 30 miles of Glasgow are concentrated over two-fifths of the total population of the country. This remarkable concentration is the result of a single century of rapid expansion. Before the union of Parliaments, which brought free trade with the West Indies and other rich storehouses of raw material beyond the seas, Glasgow, in spite of her cathedral and her university, was a small provincial town of only 13,000 inhabitants.

Taking advantage of the opportunity, its enterprising traders rapidly developed the West Indian and American trade. During the eighteenth century tobacco, sugar and cotton seemed likely to be the staples of the Clyde. At the end



Captain A. J. Buckham

FORTH BRIDGE 1,000 FEET BELOW THE AEROPLANE

The great Forth Bridge was begun in 1882 and opened in 1890. It is crossed by two railway tracks and with its approaches has a length of one mile and a half. The huge cantilevers are 360 feet above water-level and vessels of the largest size can pass beneath the spans. Just above the bridge there is the important naval base of Rosyth at St. Margaret's Hope.

of the century the population had increased to 83,000. But when the mineral resources of the adjacent country were tapped a violent stimulus was given in quite another direction. During the nineteenth century the population within a radius of 30 miles of Glasgow increased to over 2,000,000.

Birth-place of the "Carronade"

The coal-fields of Scotland, which are to be found almost entirely in the Central Lowlands, had been known from very early times and had been worked by primitive methods at the outcrop. The chief coal-fields are in Ayrshire, Clydesdale, Stirlingshire, the Lothians and Fife, but those of Clydesdale are the richest and the most extensive. Where there is fuel there will iron ore be brought to be smelted. The famous iron furnaces at Carron, near Falkirk in Stirlingshire, were established in 1760, by an Englishman, be it said.

The valuable iron ore deposits in Clydesdale were not discovered till nearly 50 years later, when David Mushet opened up the Black Band ironstone beds which still bear his name. The invention of Neilson's Hot Blast gave a tremendous impetus to the industry. Great fortunes were made by pioneers like the Bairds of Gartsherrie. New dynasties of iron kings rose and fell. Furnaces, foundries, forges, engineering works sprang up with mushroom rapidity.

Cosmopolis on the Clyde

James Watt invented the steam engine and James Nasmyth invented the steam hammer, and from these sprang the engine works and shipyards whose products have carried the name of the Clyde all over the world. And the Clyde engineer went with the engine and with the ship.

This gigantic industry was not built up on coal and iron alone. The demand of the Clyde area for labour was insatiable. Where a few years before were green fields or a solitary farm steading there grew up with more than

transatlantic rapidity great, spreading, black-country towns, such as Motherwell, Coatbridge and Airdrie, joining grimy hands with each other across the last remaining fields.

Recruits were drawn from all over Scotland, but especially from the Highlands. Names beginning with "Mac," which had hitherto been almost unknown south of Glasgow, became familiar in Clydesdale. Large numbers of Lithuanian immigrants, with unpronounceable names which they soon learned to disguise as "Macs," came to work in the mines, thus adding a new element to the racial amalgam already forming.

But the most remarkable feature of all was the wholesale influx of labourers from Ireland. In numbers it far exceeded the immigration of Dalriadic Scots from Ulster in the sixth and seventh centuries who brought Christianity with the Columban church to the Highlands, and gave their name to Scotland. This modern invasion has also had most important results in modifying the character of the population and in introducing other institutions.

Gold-mines round Leadhills

About one quarter of the total population of the Clyde valley is now Irish by birth or near descent. This district, as one of the Covenanting strongholds, was vehemently Protestant in tone. A century ago a Roman Catholic priest was regarded with something akin to horror. Now the Roman Catholics have their chapels on every hand; their schools are financed by the Education Authority; their sacred processions pass through the streets; thousands of pilgrims flock to the miracle-working grotto at Carfin; and the Catholic vote is one of the most important electoral factors.

Scotland is not otherwise rich in minerals. Iron ore has been found in some of the Hebridean islands. Gold has been worked in Sutherland and in the Southern Uplands, round Leadhills, which is the highest village in the



G. M. Tyrrell

PART OF A POPULAR SEAPORT ON THE MORAY FIRTH

Lossiemouth, so called from its situation at the mouth of the Lossie river, which is five miles distant from Elgin, is a flourishing watering-place, seaport and police burgh, the last-named having been founded in the nineteenth century from the three villages, Old Lossie, Braenderburgh and Stotfield.

The fine sea-bathing, comfortable hotels and an excellent golf course attract many visitors



Dr. Caird Ingalls

BEAUTY OF HILL, WOOD AND WATER IN GLENFINNAN

Glenfinnan is the name of a lovely glen and hamlet in Inverness 18 miles west of Fort William. Round the glen are hills mantled with trees, and in the autumn heather covers the lower slopes. At the head of Loch Shiel, a monument, erected in 1815, marks the spot where Prince Charles Edward raised his standard in 1745. The hamlet stands by the loch, which provides good fishing.



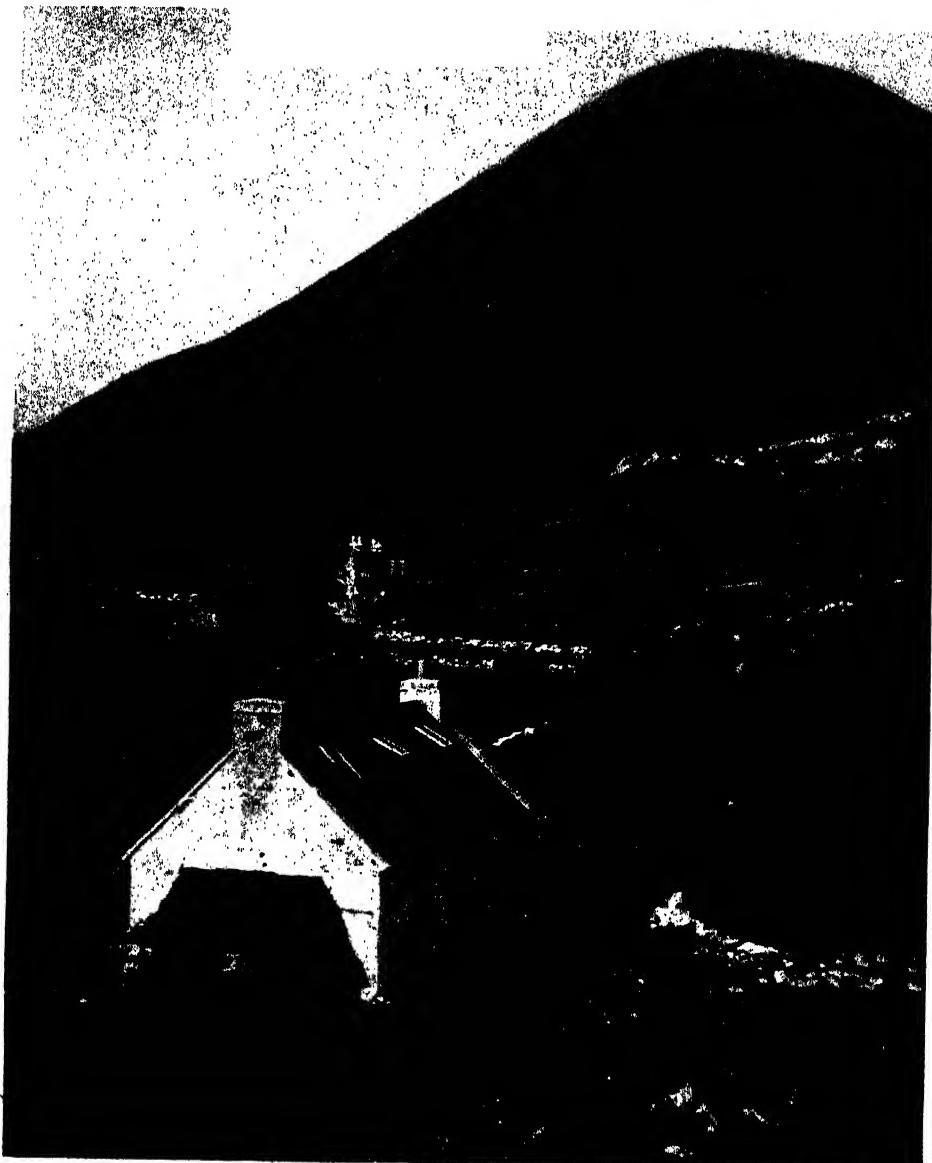
WATCHING THE HIGHLAND GAMES DURING THE ANNUAL HIGHLAND GATHERING AT BRAEMAR, ABERDEENSHIRE
Encircled by its lofty wall of the Cairn Gorm mountains, which constitute some of the most beautiful scenery in the Scottish Highlands, Braemar, village and district, is a great tourist resort, much beloved by the mountaineer. And yearly, along the old drove roads and through the mountain passes which converge from all sides on the ancient village, come numerous visitors to witness the old—yet ever new—spectacle of a Braemar gathering. There are many Highland gatherings, but none is so well known as the Braemar meeting, to which the competitors come from far and near to take part in the sports and dances.

G. M. Tyrell



SHEARING SHEEP UPON AN UNDULATING MOOR OVERSHADOWED BY THE DISTANT HILLS

The southern uplands of Scotland are grazing land, being mainly devoted to sheep; in the south-east there is considered to be one of the finest sheep-rearing regions in the world, and more sheep are to be found there to the square mile than anywhere else except in Kent. The Cheviot, one of the handsomest types, is a Scottish hill breed and noted for its straight wool. The most numerous is the Scottish Blackface, which thrives where less hardy strains starve, though by reason of its less sheltered existence it takes longer to mature. Carpets are manufactured from its coarse wool.



E. K. Holmes

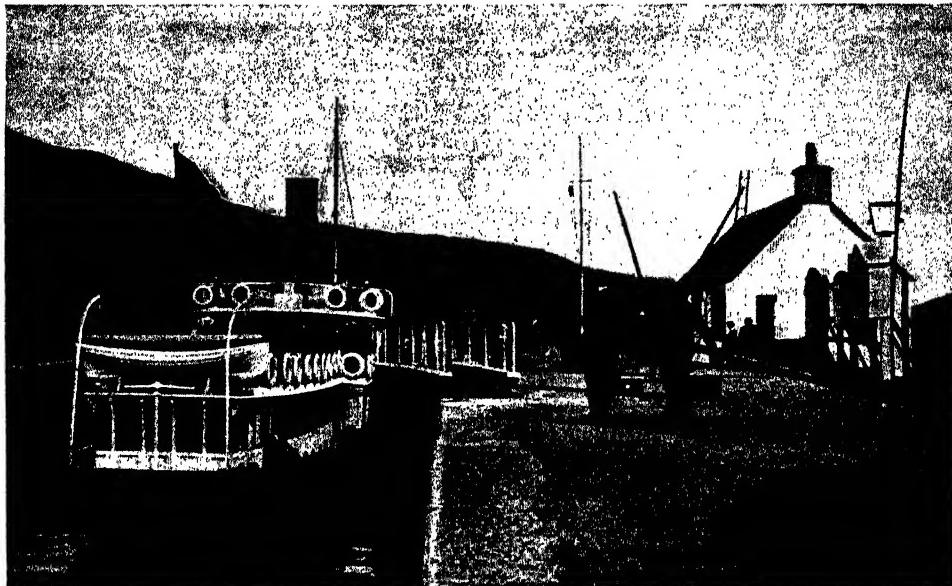
TYPICAL CROFTER'S HOUSE IN THE ISLE OF SKYE

An island of the Inner Hebrides, Skye is part of the county of Inverness, a channel half a mile wide separating it from the mainland. Its deeply indented coast-line and mountainous surface make of it a land of delight, and the north, especially, affords magnificent scenery. White marble is found in certain districts and may be seen in the "dry-stone" walls which divide the fields

country. Here also, as the name implies, is found lead, which has been mined with profit for centuries.

In Linlithgowshire are large beds of oil shale, the distillation of which gave rise to an important industry during the latter half of the nineteenth century. At Ballachulish, on the west coast, at the entrance to the wild Glencoe of

lamentable memory, are slate quarries, but this industry has had a chequered career. Aberdeen and Peterhead are famous for their granite. Good sandstone is plentiful, and its use as building material has given to Scottish domestic architecture a substantial air very striking to English eyes which are accustomed to brick.



PASSING THROUGH A LOCK OF THE CALEDONIAN CANAL

For $60\frac{1}{2}$ miles along the Great Glen, from Moray Firth to Loch Linnhe, stretches the Caledonian Canal, the great artificial waterway in north Scotland. It includes a chain of lakes, the artificial cutting covering only some 22 miles, and is navigable by ships of 600 tons and used by numerous vessels and tourist steamers. The locks, numbering 28, are opened and closed by hand

Ewing Galloway



CROFTERS' THATCHED COTTAGES CLOSE TO THE CRINAN CANAL

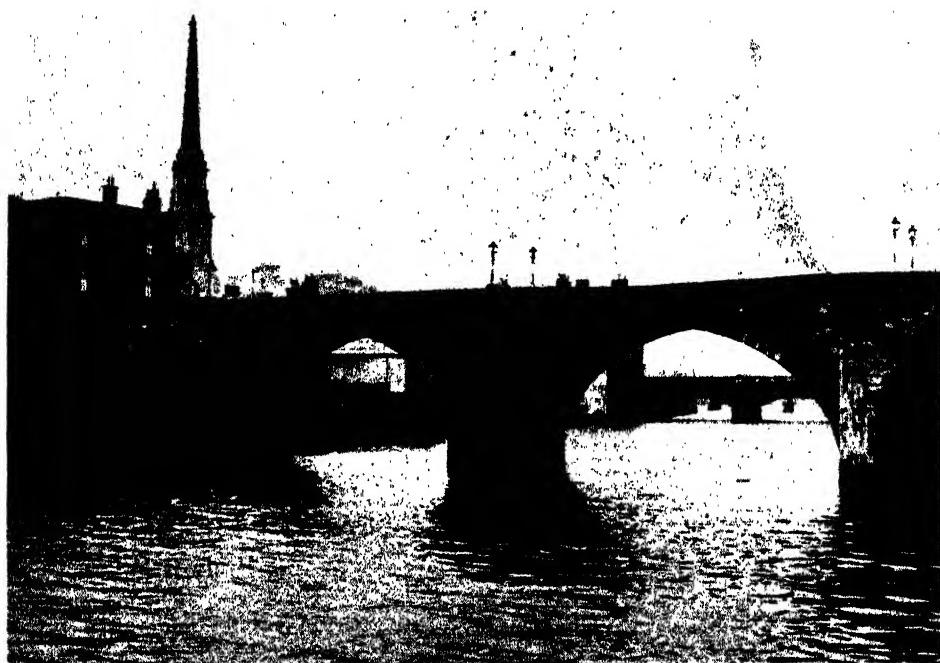
Scottish cottages have nearly always a pleasing outward appearance, despite the poverty of many of the crofters. In the Highlands the homes are, perhaps, not quite so well-kept as those in the photograph. The Crinan Canal was constructed between 1793 and 1801, to avoid the journey round the Mull of Kintyre. It is nine miles in length and has fifteen locks—nine occurring within one mile

Ewing Galloway

Outside the immediate Clyde area there are several other important industrial areas. In Ayrshire there are world-famous lace factories at Darvel, and carpets are made at Kilmarnock. The cotton thread industry of Paisley, through its ramifications, has become of international importance.

Falkirk is the centre of the light castings iron industry. The woollen

supplies of flax from the Baltic, have become the home of the linen and jute industries. Fine linens, tablecloths, sheets, etc., are made at Dunfermline, and coarser fabrics at Arbroath and Montrose. Dundee has specialised in the still coarser fibre, jute, and has of recent years felt severely the effects of Indian competition. A development of this trade is the extensive linoleum



Donald McLeish

THE AULD BRIG AND THE NEW BRIG ACROSS THE RIVER AT AYR

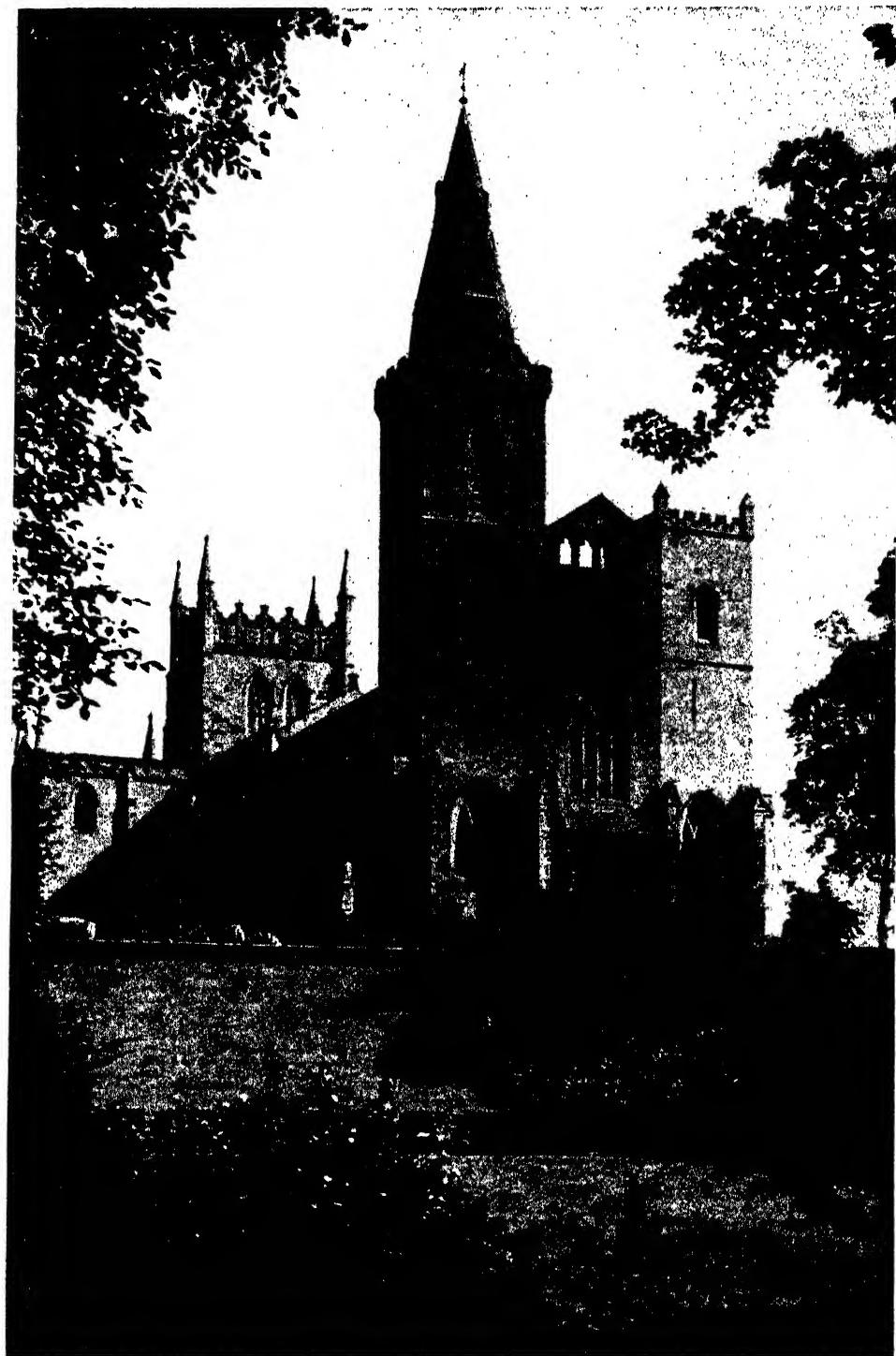
Ayr, a seaport and royal burgh, stands at the mouth of the river of the same name, which is crossed by five bridges. The first two seen in the photograph are the "twa brigs" of Robert Burns, the Auld Brig in the foreground being over 500 years old. On the left is the Wallace Tower, 115 feet high, which has replaced the building in which the patriot was said to have been imprisoned.

industries are concentrated in the valley of the Tweed, on the north bank of the Forth, at the foot of the Ochils and round Aberdeen. Hawick, Galashiels and Melrose specialise in woven underclothing, and Alloa, Alva and Tillicoultry in yarn. Tweed, the homeland of the border ballads, has also given its name to a favourite woollen cloth. Rough tweeds are also produced in small quantities from hand-looms in various Highland and Hebridean districts.

Fife and Forfarshire, owing to their convenient situation for obtaining

and oilcloth industry of Kirkcaldy. As regards agriculture, the handicap of Scotland is not climate so much as the rough and sterile character of the greater part of her surface. The aspect of Caledonia is certainly "stern and wild." Out of a total surface of 19,000,000 acres no less than 14,250,000 acres are described as "rough mountain pasture, moor and waste." Of the remainder, 3,250,000 acres are arable while 1,500,000 are in permanent grass.

Scotland (30,405 square miles) is a little smaller than Ireland (32,586), but only yields half as much agricultural produce.



Donald McLeish

DUNFERMLINE'S ABBEY CHURCH, THE WESTMINSTER OF SCOTLAND

Dunfermline, a town in Fifeshire some 17 miles north-west of Edinburgh, was formerly the favourite residence of the kings of Scotland, and is noted for its beautiful abbey, the burial-place of King Robert the Bruce and other Scottish sovereigns. The pointed tower and the walls of the building in the foreground are part of the old Norman edifice ; the remainder is a modern structure dating from 1820.

England (50,874) is not quite twice the size of Scotland, but yields five times as much agricultural produce. On the other hand, the produce of Scottish agriculture would be very much smaller were it not for the skill of the farmers and the extremely fertile character of some of the cornland in the Lothians, Fife, Forfar and Perth.

Famous Native Live-stock

The average yield per acre under wheat in England is $31\frac{1}{2}$ bushels, whereas in Scotland it is as high as 40 bushels. Nevertheless, wheat is relatively a very small crop in Scotland. Hay is the chief crop, and after it oats, then turnips and swedes for live-stock, then barley for brewing and distilling, then potatoes, Ayrshire being famous for its early potatoes. Of the arable land of Scotland the greater portion is normally kept under rotation crops of grass and clover.

From this it will be seen that the main concern of Scottish agriculture is the rearing of live-stock. Three of the most famous breeds of domestic animals, the black-faced sheep, the Ayrshire cow and the Clydesdale horse, are native to Scotland, having been perfected in the south-western counties and the Southern Uplands.

While Scotland has a population of less than 5,000,000 human beings she has 17,000,000 sheep. In the south-western counties, adjacent to the great markets of the Clyde and Lancashire, the dairy industry flourishes. In the Highlands the grazing is poorer, but large numbers of sheep and cattle are raised.

The Canadian Cattle Controversy

The fattening of stock for slaughter, as distinct from breeding, is a dominant Scottish agricultural interest, and large numbers of store cattle are obtained from Ireland. This will explain the conflict between Scottish and English agricultural interests with regard to the prohibition of the importation of store cattle from Canada for fattening.

While the English breeders and the English Board of Agriculture strenuously opposed, the Scottish graziers and Board of Agriculture as strenuously urged the removal of the ban.

Along with the black-faced sheep, the Ayrshire cow and the Clydesdale horse, the herring may claim to be a native of Scotland. This marvellous fish has played a notable part in the history of Europe, and was one of the earliest staples of trade in the north. Aberdeen is the centre of the trawlers, and in the fishing villages round that coast there are many fish-curing establishments.

Large quantities of haddock, cod, skate and halibut are also caught off the coast. The Aberdeen Findon haddock is as well known as the kippered herring. Most of the rivers abound in salmon, though industrialisation has banished it from the Clyde.

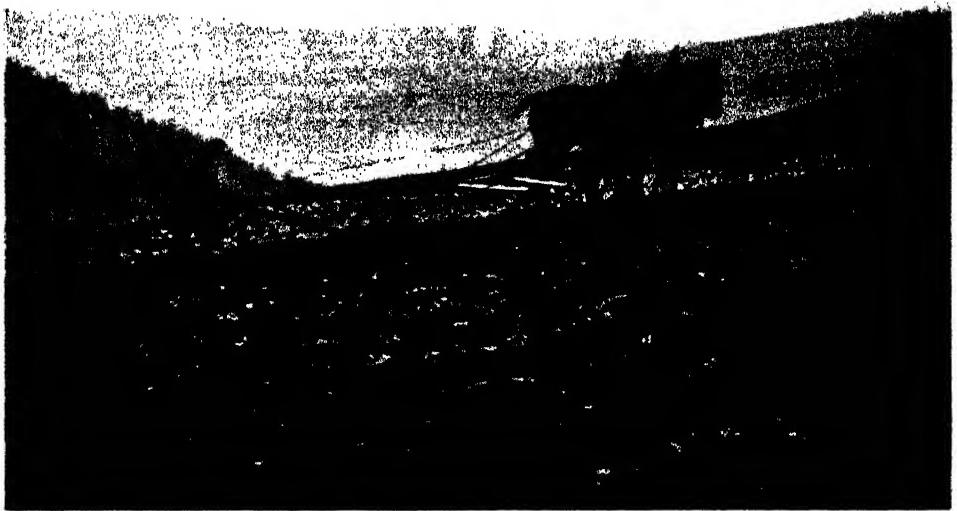
Sport as a Highland Industry

To what extent sport can be claimed as an industry is uncertain. It plays a great part in the economic life of the Highlands. Much land that would be almost valueless for other purposes produces a considerable revenue as deer forest and grouse moor, gives employment to many gamekeepers and gillies, and makes a substantial contribution to local rates.

The towns on the east coast which are popular holiday resorts depend for much of their prosperity upon the game of golf. St. Andrews is even more famous for its golf links than for its university. The stretches of sandy, grass-covered hummocks along the coast, which are known as "links," are the native home of this Scottish game.

The railways, as is natural, follow the main lines of road traffic which have been established from ancient times. One enters Scotland from England either by Carlisle at the western or by Berwick at the eastern extremity of the frontier.

The eastern route follows the coast to Edinburgh, the favourite route of invasion for hostile armies in the past. From Carlisle the Southern Uplands are



The good brown earth of a Peebles upland turns a fresh face to the sky as the ploughman an his plough follow the trampling Clydesdales

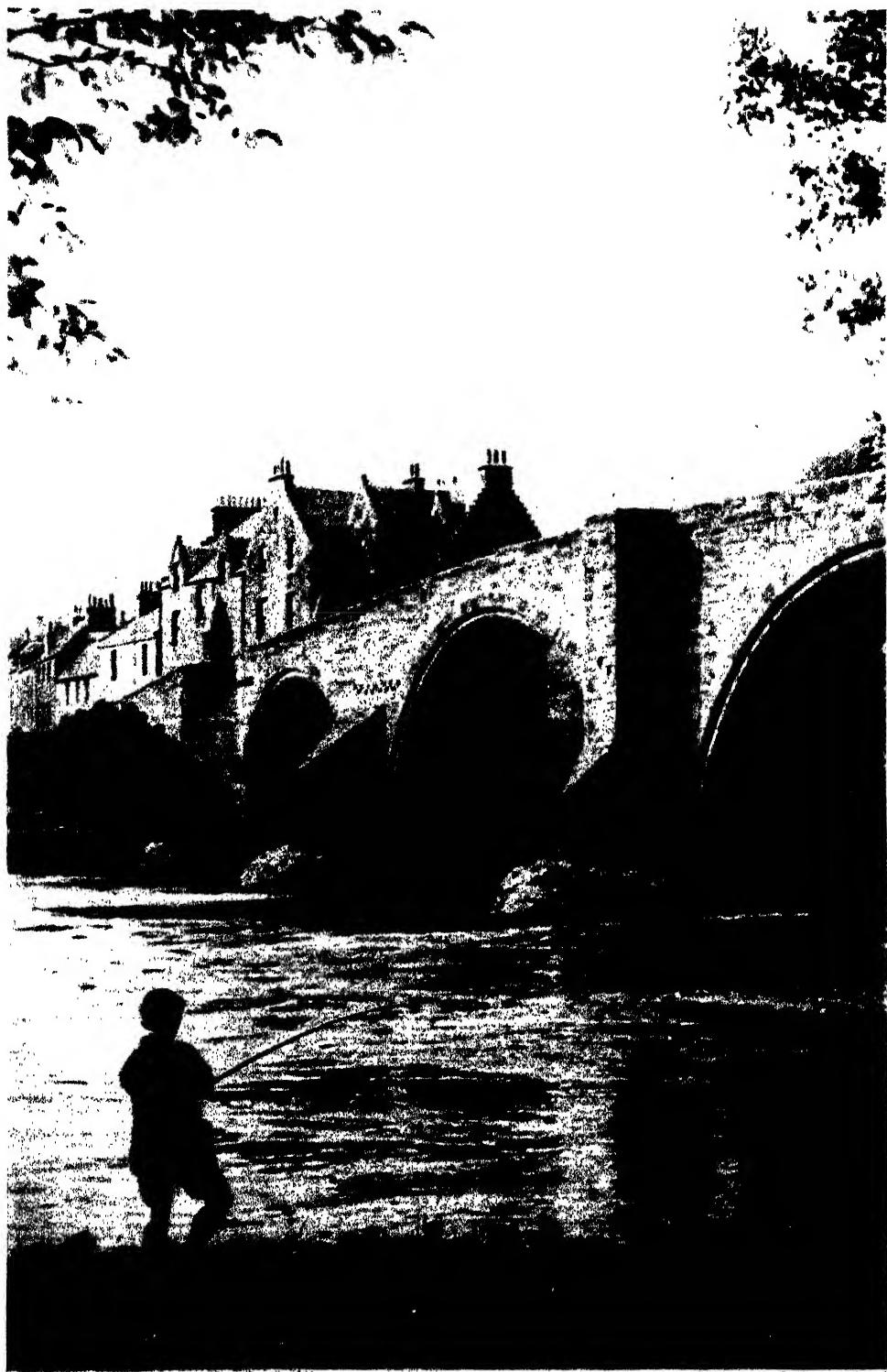


SCOTLAND. Highland cattle, descendants of the old Scottish wild oxen, come down to the reed-girt lochs to drink in the still evening



Donald McLeish

SCOTLAND. *Morning gilds the hushed legions of the leaves with sunlight where Ayrshires graze under the Trossachs' basking heights*



Donald McLeish

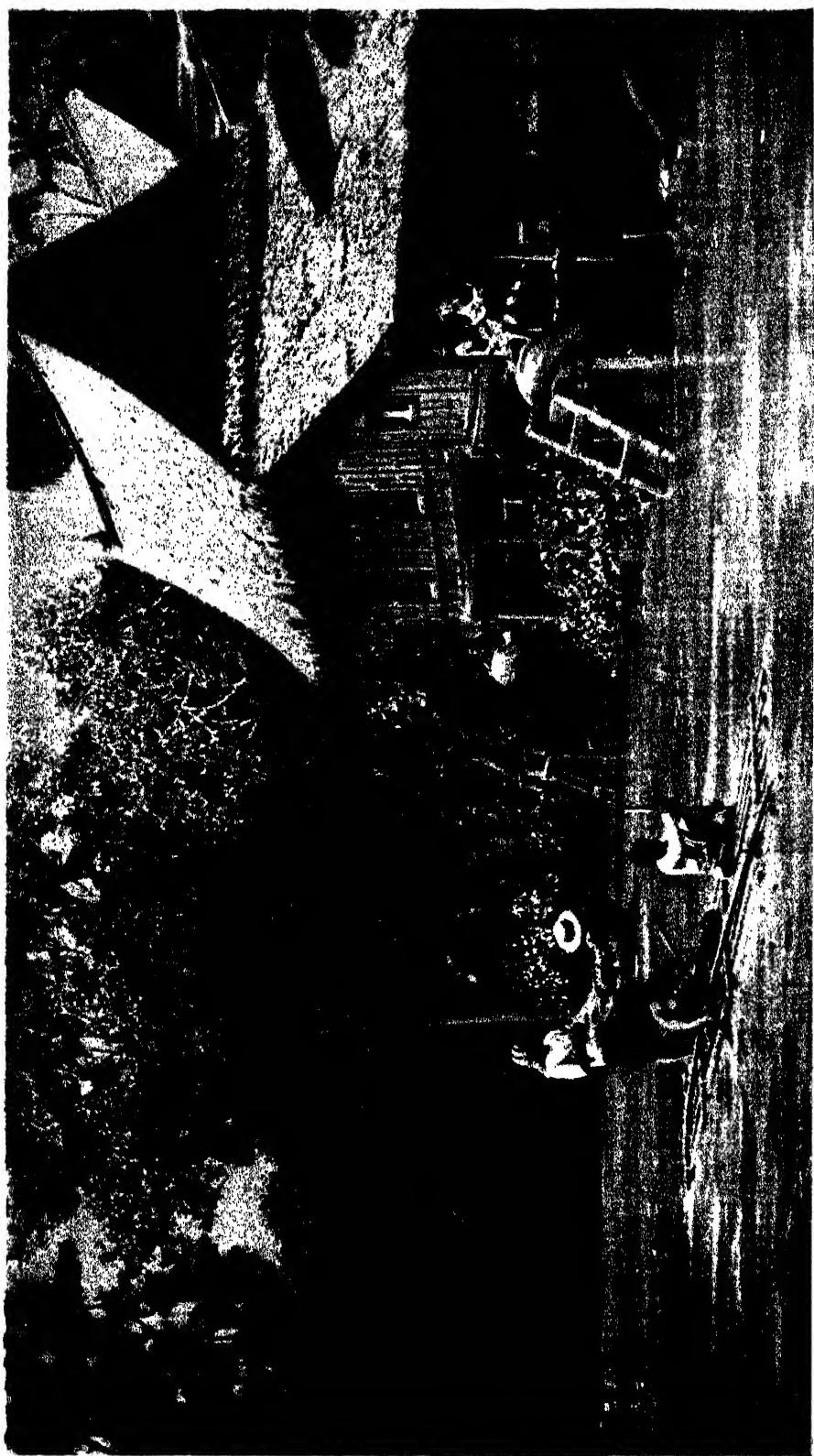
SCOTLAND. *The Forth has swirled from under Stirling's venerable bridge since 1410. There are pinnacled gateways at either end*



SCOTLAND. Black-faced sheep browse in the bracken and in the whispering grass high on the steep banks of Lomond's fairy loch. Islands, some with thick wood, stir in the wind, reflected somnolent with green



SIAM. Groves of bare palms, the nests of boats moored to the side, line the banks of the canals which have served Bangkok as roads for many years. The small craft are moored from the stern like gondolas.



SIAM. Many houses, standing upon piles, are built to suit the canals which form the drainage of Siam. In places these turbid waterways pass from the width of a single hand into long narrow tunnels.



SIAM. Elephants, regarded as the king's especial property, roam the plains without let, creating havoc among the crops. Periodically numbers of the beasts are captured and sold at trained to haul loads.

Even follow



SIAM. Blunt spires top the many temples in the Wat Phra Keo in Bangkok and every structure is covered thickly with ornament

crossed by three passes. The two passes from Nithsdale to Ayrshire and from Annandale to Clydesdale both lead to Glasgow, while the gap between the Lammermuir and the Moorfoot hills leads to Edinburgh.

The highly industrialised Midland Valley is a network of railway lines. The great feats of engineering skill whereby the firths of Forth and Tay have been bridged now enable the railway to follow the east coast all the way to Aberdeen, passing through the important industrial centre, Dundee, on the way. From Perth the Highland Railway cuts across the Grampians to Inverness and on to Wick, with a branch across Ross to Kyle of Loch Alsh on the west coast.

The Western Railway System

The west coast is tapped by two other lines. A branch line from Callander, near Stirling, leads through some of the most magnificent Highland scenery to Oban, the central rendezvous for all visitors to the west coast, and to Ballachulish. The West Highland Railway from Glasgow, after skirting the Firth of Clyde and Loch Lomond and crossing the desolate waste of the Moor of Rannoch, plunges among the mountains of Lochaber, through Fort William at the foot of Ben Nevis, to Mallaig, where it brings the herring fishers of the Hebrides into touch with the southern markets.

Owing to the numerous firths and to the mountainous character of the land, it is impossible for any railway to follow the line of the west coast. Some of the most important towns, moreover, are on islands.

Inveraray, Ardrishaig, Dunoon, Rothesay and Campbeltown, all in the Firth of Clyde, Tobermory on the island of Mull, Portree on Skye, Stornoway on Lewis and Ullapool, like Kirkwall and Lerwick, on the Orkney and Shetland Islands, with dozens of other smaller fishing villages, are dependent upon steamer communications. The motor-bus and the Road Board, however, are opening up new possibilities.

It would take too long to specify all the towns. Many of considerable importance have not yet been mentioned. Outside the industrial belt they are less highly specialised, and present an agreeable mixture of rural and urban conditions. Towns such as Girvan, Ayr, Dumfries, Lanark, Peebles, Linlithgow and Dunbar, to name only a few in the southern counties, and Fraserburgh, Banff and Elgin, farther north, are popular holiday resorts as well as prosperous centres of local industry.

Geographical Specialisation

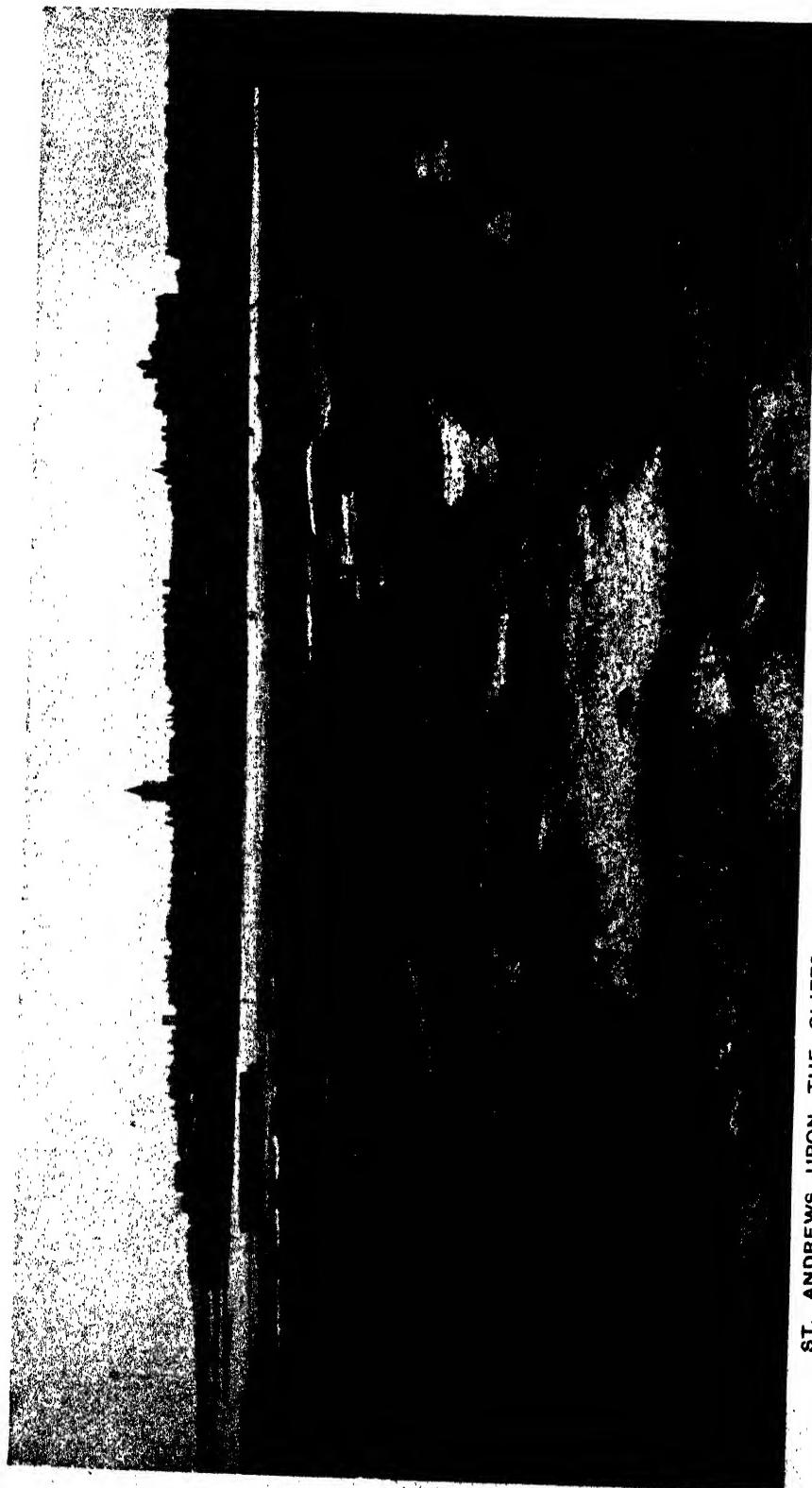
The Highlands present a special problem by themselves. Racially the inhabitants are not very different from those of any other part of Scotland. But geographical and climatic conditions have combined to develop special traits of character and different social and industrial habits.

Here, almost to our own day, existed the peculiar tribal system known as the clans. Gaelic is still spoken over a considerable portion of the area. The crofter system of land tenure prevails. Moreover, a belt of country, extending from Aberdeenshire through Inverness-shire and out into the islands, was untouched by the Protestant Reformation and still remains Roman Catholic.

Depopulation of the Highlands

During the past century the Highlands have been steadily becoming more depopulated. Owing to poor soil and inadequate communications their economic position gradually deteriorated. Early in the nineteenth century the proprietors, finding they could get bigger returns from sheep farms and deer forests, and regardless of ancient rights, set about "clearing" the land.

Wholesale evictions were carried out, and the bitterness of that time has left its mark upon the Highland temperament to this day. Successive Acts of Parliament have given to the crofters the security they claimed. But all this legislation, while it has led to a great improvement in housing, has brought



ST. ANDREWS UPON THE CLIFFS AND THE EDGE OF THE FAMOUS LINKS IN THE FOREGROUND

St. Andrews stands upon a wide bay where the Eden falls into the sea, and was a royal burgh as early as 1124. The cathedral, which dates from the twelfth and thirteenth centuries, was originally a priory, and fell into decay after the Reformation; very little remains of the old castle, but the Bottle Dungeon, 24 feet deep, is still to be seen. In the centre of the photograph is the tower of S. Salvator's, founded in the fifteenth century. The university buildings are nearly all modern and of no great interest. St. Andrews is the headquarters of golf, and here are the splendid links of the Royal and Ancient Club.



OBAN

OBAN, BEAUTY SPOT AND FAMOUS TOURIST CENTRE OF ARGYLLSHIRE, ON ITS LAND-LOCKED BAY

Oban, the popular seaport and watering-place, lies on the coast of Argyllshire, 113 miles by railway from Glasgow. Finely situated among a number of undulating hills, its seaward outlook is no less impressive, and embraces a smooth stretch of harbour, the green shores of Kerrera Island which protect the bay, and, far away in the distance, the hazy hills of Mull. A favourite centre for excursions, with its noted ruined castles of Dunstaffnage and Dunollie, Oban is visited annually by numerous tourists, who find excellent accommodation in this beautiful town, where it is said "every second house is an hotel, and those between let rooms."



INVERNESS CASTLE AND THE SUSPENSION BRIDGE OVER THE NESS

Inverness, called the "capital of the Highlands," stands on both banks of the Ness, at the head of the Moray Firth. The present castle was built in the nineteenth century, but the first is supposed to have been erected by Macbeth on the Auld Castle Hill. The shops of the Highland Railway are in the town, and other industries include distilling, tanning and the manufacture of woollens.

neither peace nor prosperity to the Highlands. The population still diminishes. There is still an unsatisfied demand for land to cultivate.

The cost of equipping new small-holdings has been found to be prohibitive, having regard to the productive capacity of the land. The cost of education on modern lines, of road-making, of police and of sanitary supervision has almost risen beyond the ratable capacity of many of the districts affected.

From these Highland counties comes a continuous demand for grants and subsidies from the Imperial Exchequer to make new roads, piers and harbours, to maintain additional steamer communications, to provide special educational facilities, to equip small-holdings with buildings, roads, fences and water supplies on an unremunerative scale.

Under present conditions the land is incapable of absorbing the natural increase of population. In many cases it cannot support the existing population on modern standards of comfort. On

the sea coast, in normal times, fishing provides an admirable part-time industry which fits in with the cultivation of a croft. Proximity to a town, or to a holiday resort, provides some with a lucrative market for their produce. A few find employment as shepherds, gamekeepers and gillies. But such is the limited home horizon of the gallant race of Highlanders.

In two directions it seems possible to restore prosperity to the Highlands—by afforestation, and by the development of the latent water-power resources of the country.

The moist climate of Scotland is admirably suited to the growing of timber, but owing to the improvidence of the past the country has been practically denuded of forests. It has been estimated that about one quarter of the total surface at present classed as waste or poor grazing would yield a profitable return on capital invested in afforesting it.

In fully developed forest land, as in Germany, from twenty to thirty times

as many people can be employed as are now employed as shepherds or gamekeepers. Numerous subsidiary forest industries spring up. The arable land is reserved for small-holdings, the occupants of which can find profitable winter occupation in the forests. The state has now started the work of afforestation through the Forestry Commission, over which Lord Lovat presides.

Sweden and Norway have pointed the way in the utilisation of water-power. The foaming rivers which descend from their mountains are known as the white coal of the country. Its most potent application is now seen to be the generation of electricity in bulk. A beginning has been made in the Highlands by the enterprising British Aluminium Company, at the Falls of Foyers, on Loch Ness, and at Kinlochleven, near Ballachulish.

There the electric power is used to heat the furnaces in which aluminium ore is reduced to the brilliant and useful metal. At the head of the remote Loch

Leven, inaccessible until quite recently by road, the stranger is surprised to find a modern pier with electric cranes, an electric railway, electric light along the roadway and in the cottages electric heating and cooking, and a prosperous little colony of skilled workmen and scientists from all parts of the country.

A much greater scheme for utilising the water-power of the Grampians has been authorised by Parliament. One can see a vision of industrialism, without its smoke and grime, establishing itself among the mountains.

Generalisations about the character of the Scottish people are very misleading. Many races have been blended, in varying proportions, to make the modern population, and, as I have shown, this process is not yet ended. Differences of climate, occupation and social evolution have left their mark.

The dark-haired type that occurs in the west Highlands is probably descended from a mixed Alpine and



IN CASTLE STREET, ABERDEEN SCOTLAND'S FOURTH LARGEST CITY

The Market Cross, seen above, with the medallion heads representing Scotland's sovereigns from James I. to James VI., was erected in Castle Street, Aberdeen, in 1686, on the site of an earlier cross. The Duke of Gordon's monument, near the beginning of King Street, on the right, faces the handsome municipal buildings, and commands a vista of busy Union Street

Iberian stock which arrived via Ireland. Mingled with them are the big-boned, red-haired Picts described by Tacitus, probably Bronze Age migrants of mixed Alpine and Nordic descent, who made their way north along the east coast through England.

Overlying them both are the fair-haired, blue-eyed descendants of the Vikings, pure Nordics. The Lothians were originally peopled by Angles from the mouth of the Elbe, and Strathclyde by Brythonic tribes of ancient British, or Welsh, origin.

From such components have been evolved the infinitely various types that people the novels of Sir Walter Scott. From this soil sprang both the hard-headed materialism of Aberdeen and the lyric rapture of Robert Burns, the logical rationalism of David Hume and the amorphous emotionalism of MacPherson's "Ossian," the acquisitive genius of Andrew Carnegie and the self-sacrificing devotion of David Livingstone. One could multiply instances.

Such broad differences in national characteristics as do exist between Scotland and England may be traced, not to race, but to the following circum-

stances. England started on the march to civilization as a fully developed Roman colony, which Scotland never was. England, similarly, was influenced by the Normans in a way in which Scotland never was.

The ancient alliance between France and Scotland has left some marks. Scotland had a start of several centuries over England in the matter of popular education. At the Reformation they took different ways, Scotland becoming Presbyterian and England remaining Episcopalian, and this divergence has had profound reactions. To it may be traced the preoccupation of the Scottish mind with questions of Church government, theology and metaphysics.

It has been well said that the difference in national characteristics is illustrated by the first question in the Catechisms of the respective national Churches.

The Englishman is a plain, matter-of-fact, practical man, and his Catechism commences with a plain, matter-of-fact question, "What is your name?" The Catechism of the Scottish Presbyterian, on the other hand, commences with "What is man's chief end?"—a highly "metaphysical" question.

SCOTLAND : GEOGRAPHICAL SUMMARY

Natural Divisions. An elevated plateau carved by erosion into residual peaks, deep, narrow glens and rocky lake basins. The whole split along two lines of fracture with a wide trench between—one of the classic examples of a Rift Valley—wherein coal and iron have been preserved. Thus three divisions—the Northern Highlands, the Southern Uplands and the Central Lowlands. The plateau forms part of one of the oldest land areas in the world, and with Scandinavia and north-west Ireland forms the European relic of the old continent of Arctis. (Cf. Europe.)

Climate. By elevation and latitude cool in summer, with long days and short nights. By situation on the margin of the ocean, within the "winter gulf of warmth" of the north-east Atlantic, warm and wet in winter, with snow on the heights. The higher the ground, the rainier; the nearer the west, the rainier, and the warmer in winter. Cape Wrath is warmer in January than London.

Vegetation. Naturally a forest land, yet most of the virgin forest has been cleared. In the north, moor-land. In the

south, grass-land. The marginal and central lowlands are tilled.

Products. On the southern grass-lands one of the densest sheep areas in the world, hence tweeds. On the relatively small areas of arable, some of the best farming in the world for potatoes, wheat, oats, etc.; hence the sale of seed potatoes and seeds from market gardens. On the moorlands, highland cattle. In the Rift Valley, industries with worldwide ramifications; ships from the Clyde, sewing cotton from Paisley, jute goods from Dundee, books and printing from Edinburgh.

Communications. Overseas from Glasgow. Continental from Leith, Dundee and Aberdeen. Railways to England via Berwick or Carlisle.

Outlook. Scotland owes much to her export of men. They have migrated to England, Canada, Australia, New Zealand and India; they sail the Seven Seas; and they send business back to the Mother Country. Scotland's future lies in the continued excellence of her specialties, the products peculiar to her historical development and geographical resources.

SERBIA

The Coasts & Hinterland of Yugo-Slavia

by Frank Fox

Author of "The Balkans," etc.

IN the minds of most people "the Kingdom of the Serbs, Croats and Slovenes," as it is officially called, will be always known as "Serbia" because the heroic courage of Serbia in the Great War made that name a household word throughout the world.

"Yugo-Slavia," the country of the Southern Slavs, is a more comprehensive term, but in truth, "Serbia" is sufficiently exact. Most of the population, whether styled Serb, Croat or Slovene, is racially Serbian : all the area was once before under Serbian rule ; and, in time to come, despite certain differences of religion and of language, Serbia will doubtless become a thoroughly homogeneous state.

It comprises old Serbia, a part of what is known as Macedonia, old Montenegro, Bosnia, Herzegovina, Dalmatia, Croatia, Carniola and Slavonia (the last six districts were under the Austro-Hungarian Empire before the Great War).

Some facts of Balkan history need to be recalled to explain the constitution of this Kingdom of Serbia.

First Constituents of the Nation

Tribes of Don Cossacks began to enter the Balkan Peninsula in the sixth century during the period of the decline of the Roman Empire. In the seventh century they were encouraged to settle in what is now Serbia, on condition of paying tribute to the Greek empire at Constantinople. They set up an aristocratic republic of a Slav type and were very soon hotly at war with their neighbours.

Early in the tenth century the Bulgarians (a Tartar-cum-Slav race) almost effaced Serbia from the map,

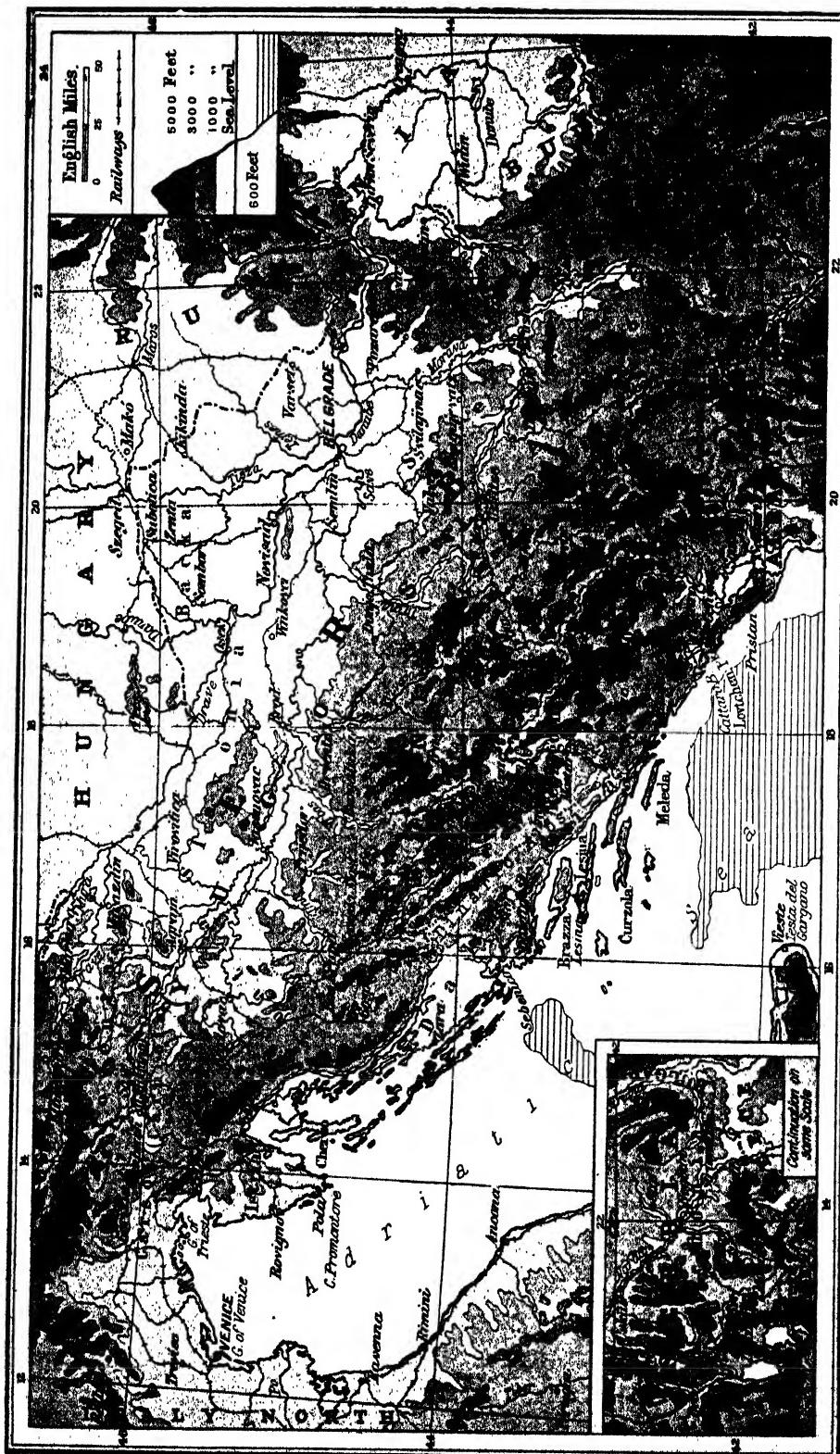
but the Serbs recovered after half a century, to come shortly afterwards under the sway of the Greek Empire. In the eleventh century the Serbians reasserted their strength and became a powerful nation. They entered into friendly relations with the Pope of Rome and for some time contemplated following the Roman rather than the Eastern or Greek Church (to-day the Croats and Slovenes generally follow the Roman Church, and the Serbs proper the Eastern).

Serbia Established as a Power

In the twelfth century King Stephen of Serbia was a valued ally of the Greek empire against the Venetians. He established Serbia as a European "power," and the Emperor Frederick Barbarossa visited his court at Belgrade. King Stephen was the first of a succession of able and brave monarchs, and Serbia enjoyed a period of stable prosperity and power unusually lengthy for the Balkan Peninsula.

Except for the strife between the Eastern and Roman Catholic Churches for supremacy, the nation was at peace within her own borders, and enjoyed not only a military but an economic predominance in the Balkans. Mining and handicrafts were developed, education encouraged, and the national organization reached fully to the standard of European civilization at the time.

In 1303 Serbia helped the Greek empire against the growing power of the Turks, undertaking an invasion of Asia Minor, and in 1315 again saved the Greek empire from its powerful enemy. When in 1336 Stephen Dushan, the greatest of Serbian kings, who has been compared to Napoleon because of his



TOWNS, RAILWAYS AND GEOGRAPHICAL FEATURES OF THE KINGDOM OF THE SERBS, CROATS AND SLOVENES

military genius and capacity for statesmanship, came to the throne, he ruled over a greater area than the present kingdom of Serbia:

When the disunion of the Christian states in the Balkans brought the Turk into possession of the Balkan Peninsula, Serbia was the last to succumb. Towards the end of the fourteenth century her power was broken by the Turks on the field of Kossovo (1389). Even then a remnant of the race kept its independence on the Black Mountain, or Montenegro.

During the nineteenth and twentieth centuries the Turkish domination of the Balkans was destroyed chiefly through the efforts of the Serbs. Later the Serbs, alone of the Balkan Peninsula peoples, consistently and stubbornly resisted the German ambition to stretch the Teutonic power to the Aegean, and when the German power was broken they entered into possession of their historic racial territory. The Serbian

boundaries of to-day are thus not only the legitimate reward of military virtue: they are historically and ethnographically justified.

Serbia makes roughly the western rectangle of the Balkan Peninsula bounded by Austria and Hungary on the north, by Italy and the Adriatic on the west, by Albania and Greece on the south, by Bulgaria and Rumania on the east.

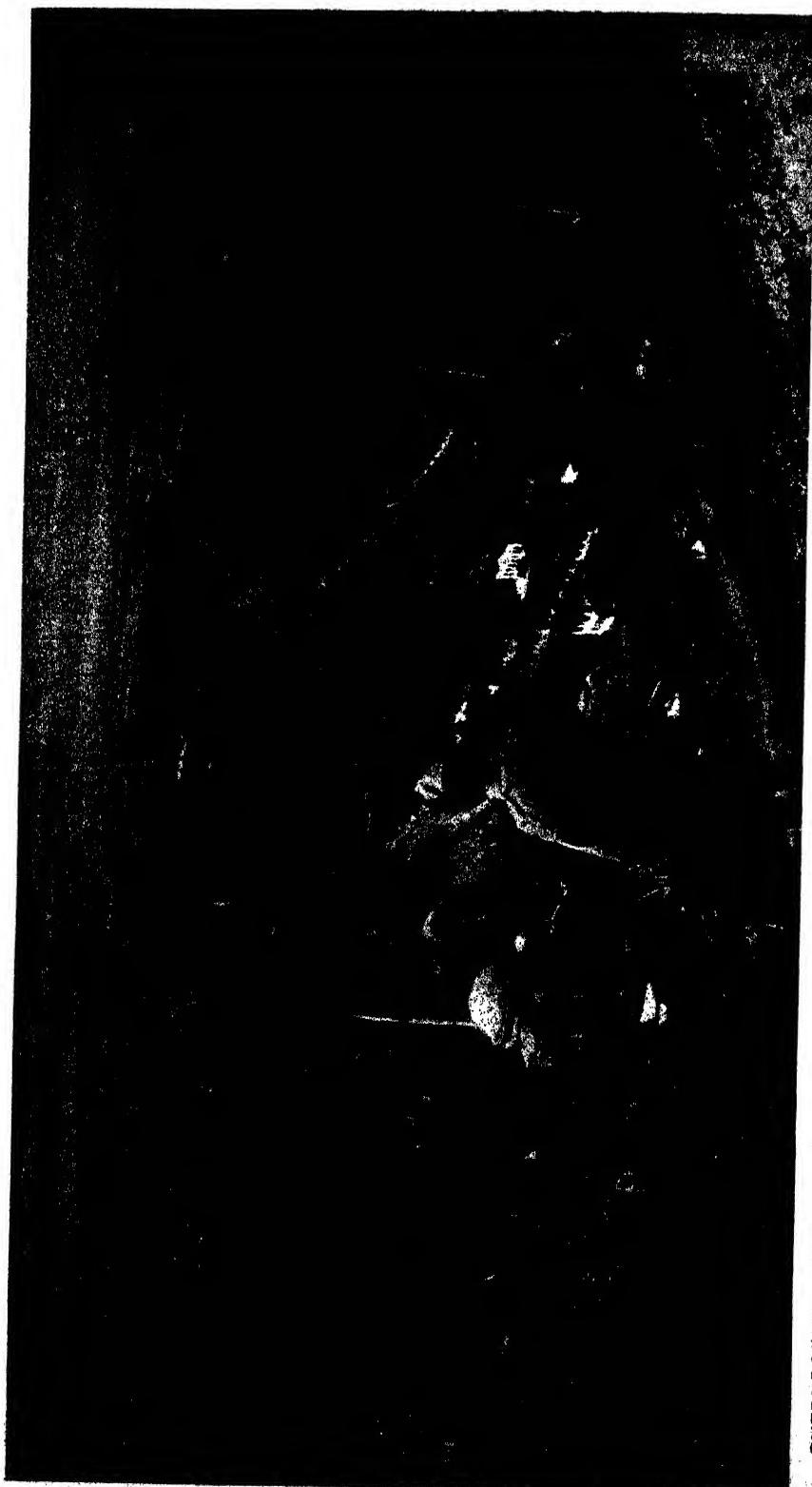
Along the western frontier the Dinaric Alps run; on the seaward side they constitute a well-defined mountain barrier with some fine peaks (such as Durmitor, Jablanov and Lovtchen, the fortress mountain which commands the bay of Cattaro). Inland towards the east the Dinaric Alps degenerate into a jumble of broken hills and valleys. Into eastern Serbia there come offshoots of the Transylvanian Alps and of the Rhodope Mountains. Into southern Serbia come offshoots of the Pindus range.



Bwing Galloway

GRAIN MARKET IN A PUBLIC SQUARE OF MONASTIR

An ancient Macedonian city, Monastir, the most southerly town in Yugo-Slavia, lies 130 miles north-west of Salonica with which it has communication by rail. Although modern mills are increasing, Macedonian farmers still carry their grain into the towns, as in the days of Alexander the Great, and retail it to the consumers, many of whom grind it with stones turned by hand



Lent-Oil, P. Gille

OVERLOOKING THE SQUAT TILED ROOFS AND SOARING MINARETS OF PRIZREND, A TOWN OF SOUTHERN SERBIA
In ancient geography Macedonia was a country of south-eastern Europe lying north of Hellas ; in modern geography the name is used for a region north-west of the Aegean Sea lying partly in Yugo-Slavia and partly in Bulgaria. Since the middle of the nineteenth century numerous struggles have taken place in this area between the Greeks, Serbians and Bulgarians, and Prizrend, a trading town of Serbia situated on the eastern edge of the Albanian mountains, 60 miles east-north-east of Ustikub, was the scene of heavy fighting both during the Balkan War of 1912 and the Great War.



SPALATO FACING THE ADRIATIC WITH THE MOUNTAINS OF DALMATIA IN THE BACKGROUND
Spalato is situated in Dalmatia on a peninsula 74 miles south-east of Zara, and is one of the principal ports of Serbia. Overlooking the harbour is the campanile of the cathedral, and facing the quay upon the right is the long facade of the Palace of Diocletian, which was built by that emperor in A.D. 303, when he founded the place. The walls of the Palace enclose an area of about nine acres, upon which is built a large portion of the town. The cathedral was originally the mausoleum of Diocletian, and the campanile was added in the fourteenth and fifteenth centuries

Ewing Galloway

The western drainage area into the Adriatic is narrow. One river, the Narenta, cuts right through the mountain range and gives the interior of Serbia some kind of water communication with the Adriatic, but for most of its course it runs between very precipitous banks, and nothing would ever make it a good waterway.

From Belgrade to the Iron Gates

The Danube, the Morava and the Save are the chief rivers of the north and the east. The chief inland plain is the Blackbirds' Field (Kossovopolje) where in 1389 the Serbian nation was overwhelmed by the Turks. There are extensive riverine plains along the courses of the rivers in the Danube drainage area; smaller plains along the courses of the short coastal rivers.

The coast is generally rugged, it is fringed by an archipelago and has but few good harbours. The general aspect of Serbia is rugged and the proportion of plain and plateau to mountain is small. The natural beauty of Serbia is superb. No grander scenery can be found in Europe than is offered to the voyager who follows the Danube down from Belgrade to the Iron Gates. On the Serbian bank of the river he passes a procession of noble mountains, forest-clad, with glimpses of lovely valleys.

Path of the Great Serbian Retreat

Leaving the river at any of the points where roads run to the south he passes through country generally of savage grandeur but sometimes of gentle prettiness. There are numerous monuments of the Roman occupation and of the Byzantine Empire. The tourist who is not prepared to travel on horseback or by ox-wagon cannot hope to see the full charm of the country for railways and good carriage roads are rare.

There is a different type of natural beauty to be observed by the voyager from the Adriatic coast to the interior (again the warning is necessary that roads are generally primitive). Going up from the coast the traveller will

encounter some of the actual virgin forests of Europe.

The change from the luxuriant semi-tropical vegetation of the coastal strip to the straggling thickets of the higher slopes of the mountains gives great variety of scenery, and, looking back, there are some wonderful glimpses of the sea and of the archipelago.

A journey which offers as splendid scenery and as poignant historic interest as any in the world is to follow the path by which the remnant of the Serbian army retreated to the coast in the Great War, driven from the country, which it had successfully held against Austria, by the combined forces of Germany, Austria and Bulgaria.

With that retreating force travelled a British hospital unit, and the army saved some of its guns. Yet the track seems impossible for a wheeled vehicle.

Soil, Climate and Winds

The soil in the coastal and riverine plains and valleys is fertile, in the mountains generally poor but suitable for forestry and for pastoral occupation. The climate ranges from the Mediterranean type (moist and warm) in the west to the Continental type (drier and with great extremes of temperature) in the east. On the coast, air currents of warm temperature and high humidity are fairly persistent. The prevailing wind is known as the "sirocco," but is not the hot, dry wind called by that name in Italy and Spain. A wind from the interior to the sea known as the "bora" is warm and dry.

Snow is hardly known in the coastal region; in the mountains it covers the ground for five or even six months of the year. In the coastal region the chief rainfall is in the winter; inland the chief precipitation is in the spring or early summer.

The vegetation on the coast is Mediterranean in character; the olive and the cork oak flourish. Vines do well in the valleys and a wild vine is found in the southern mountains. Figs, apples and pomegranates are cultivated



E. N. A.

PRINCIPAL STREET IN KRUSHEVATZ SHOWING THE LAZAR MEMORIAL

The prosperous town of Krushevatz, medieval capital of Serbia, lies on the Western Morava, ten miles above its confluence with the Morava. Several markets are held annually for the sale of agricultural produce, and the importance of the town is enhanced by its connexion with the main Belgrade-Nish railway by the Ushnitsa branch. The monument is to the memory of Lazar, the last Serbian Tsar



E. N. A.

IN A SQUARE OF LJUBLJANA, AN OLD SLOVENIAN TOWN

Ljubljana, formerly the capital of Carniola, a province of Austria-Hungary, and known as Laibach, is now the chief town of Slovenia, the north-eastern section of Yugo-Slavia. Lying on a well-watered plain on the Vienna-Trieste railway, the town has manufactures of textile and leather goods, machinery and paper. The marble fountain seen above in the town-hall square dates from 1752

extensively ; the plum is, however, the national fruit and it is largely used for preserves and the distillation of spirits.

A great part of the area of Serbia is forest covered, oaks predominating. The great herds of pigs, the rearing of which is the foremost industry of the country, are pastured in the oak forests. Maize is the cereal chiefly grown, but wheat, barley, oats and rye are also cultivated. Potatoes are hardly known, but onions, garlic, paprika (Turkish pepper), beans and cabbage are common.

Mineral Wealth in Neglect

The mineral resources of Serbia are great and varied, though the degree of productive exploitation is very small—probably smaller than in the fourteenth century. Copper, iron, lead, silver, zinc, sulphur, coal, chrome, manganese, salt and oil shale are found.

It is probable that a policy of vigorous development will be followed when adequate financial support can be obtained (already British oil interests are developing in Albania, territory similar to that of southern Serbia).

The chief occupations of the country are pastoral and agricultural : the rearing of pigs, cattle, goats, sheep, horses ; the exploitation of the forests ; the cultivation of grain and fruits. There are "peasant industries" of leather-working, embroidery and cabinet-making. The mining industry is beginning to assert its importance in the national life, and lithographic stone, marble and slate are quarried.

General Knowledge of Farming

The agricultural and pastoral industries are fostered in every possible way. They are taught in the schools. No one may enter the civil services in any capacity unless he has his school diploma showing that he has passed in some branch of pastoral or agricultural or dairying knowledge.

The system of agricultural cooperation has served as a model for many other countries. When in 1830 the agricultural workers of Serbia were

liberated from serfdom, the state inaugurated on their behalf a system to protect them from famine and exploitation by usurers. Village warehouses were set up in which was stored the surplus grain of fertile years. The agriculturist was allowed cheap credit from the government.

This state system was supplanted at a later date (1895) by a system of voluntary cooperation. Agricultural cooperative societies were formed to deal with production, storage, credit, health and insurance. These agricultural cooperative societies joined together in a strong union and in 1898 the Agricultural and Artisan Cooperative Act of the Serbian Parliament gave them an excellent charter.

Agricultural Cooperative Societies

The Serbian agricultural cooperative societies at the present time cover every agricultural and pastoral industry including dairying, vine-growing, fruit-growing and fruit-drying ; also the purchase of seed and machinery and the safeguarding of the health of members. Cooperative societies for the breeding and preservation of good stud cattle have been founded.

The bulk of the land is held by peasant proprietors. These are organized into communes. Though there is in Serbia, to almost the same degree as in Bulgaria, a policy of seclusion of the women of the nation, a Serbian woman may be the head of the village commune, and, as such, exercise a real authority.

The rights of the communes are very jealously safeguarded. The central government must take no part in their administration, nor maintain any agents of its own to interfere with their affairs. Every district is subdivided into communes, which are either urban or rural. The commune is a corporation. Every subject must belong to a commune and figure in its registers, the laws not tolerating the state of vagrancy.

The chief trade of Serbia is with Italy. Imports from Italy represent about 24 per cent. of the total, and

Czechoslovakia, Austria and Great Britain range next. The exports also are chiefly to Italy with 30 per cent. of the total, Austria, Czechoslovakia, Hungary and Greece ranging next. The most important exports are cattle, meat and other cattle products, timber and prunes.

The main railway lines are from Belgrade via Nish to Constantinople (a branch of the "Orient Express"), and from Belgrade to Salonica. The total of normal gauge lines within the kingdom

Serajevo, the scene of the murder of the Austrian Archduke which ushered in the Great War; Nish, an important strategic point; Cetigne, the old capital of Montenegro which was a notable centre of Serbian culture in the Middle Ages and possessed one of the first printing presses in Europe (the type was melted down to make bullets in a war against the Turks); and Ragusa, a fairly good port on the Adriatic. Fiume cannot be called a Serbian city but may, by friendly arrangement with Italy, be



J. Eric Jackson

ALONGSIDE THE MORAVA, SERBIA'S PRINCIPAL WATERWAY

From the point, near Krushevatz, where the Western and Southern Morava join their waters, the combined streams are known as the Morava. Winding north, it falls into the Danube some 30 miles east-south-east of Belgrade, and has a total length of about 250 miles. The Morava, whose valley was prominent in the Great War, is navigable from its junction with the Danube up to Nish

is 3,732 miles. There are also 1,952 miles of narrow gauge lines. The Danube and the Save give good water transport to northern Serbia. The Adriatic coast is poor in harbours. The most important are Ragusa and Cattaro.

Postal, telegraph and telephone services are not fully developed. There are about 3,600 post offices, 850 telegraph stations and 730 telephone stations in the kingdom.

The chief towns are Belgrade (which has been dealt with in a separate chapter); Agram, the old capital of Croatia-Slavonia with a population of 80,000;

partly at the disposal of the kingdom as a port.

Serbian rural conditions are still marked by the conditions imposed upon a people constantly fighting for independence. The tendency is for homestead, village and town to be in the best positions for defence, not for inter-communication. Health conditions are generally good; but there is some malaria on the coast marshes and flies are a nuisance in the summer.

The Serbian was a much abused national type before the outbreak of the Great War. An indomitable folk,

cherishing dearly their independence, they were little liked by their Turkish, Grecian and Bulgarian neighbours, and they were the "black beasts" of German propaganda.

I recall being an unconscious victim of this German propaganda, and can remember, when going to Belgrade for the first time, carefully loading my revolver as the train crossed the river to enter the city. My idea was that the week-end pastime of the inhabitants was massacre, and that the stranger kept his life only if he had a ready trigger. Going away I knew better.

All the same they are no tame people, the Serbs. During the Turkish occupation a Serbian woman who was victimised by a Turk strangled her infant at birth rather than rear the child of the enemy.

Marriage among the Serbs is early; families are large. As is usual in countries which have come into contact with the Turk, the women are expected to live a secluded and domestic life. The men are usually tall and handsome, the women very good-looking.

The Montenegrin is a Serbian Highlander, and while the Serbian empire flourished, claimed for himself no separate national entity. When, however, the rest of Serbia was subjugated by the Turks, "the Black Mountain" held out, and there gathered within its little area of rocky hill fastnesses the free remnants of the

Serbian race. The story of that little nation transcends the story of Sparta, and makes the fighting record of the Swiss seem almost tame.

The Croats are of the same race as the Serbs but Roman Catholic in religion. Their family communities, or zadrugas, each consisting of from ten to twenty persons under a domacin or gospodar, are characteristic of this Slav race.

Of the inhabitants of Bosnia-Herzegovina, most are Slavs and speak the Serbian language, but they are strangely divided in religion, and 42 per cent. give allegiance to the Orthodox Church; 34 per cent. are Mahomedans, the remainder belong to the Roman Catholic Church. However, religious barriers are falling away with the growing consciousness of racial unity. This district is described separately.

The Macedonian portion of the Serbian population presents a somewhat troublesome problem. For centuries the Macedonian district has been the chief storm centre of the Balkans, the recruiting ground for bands of irregulars, the No-man's Land in which Turk, Greek, Bulgar, Albanian and Serb could always foment (or find) trouble.

But the Serbian kingdom is facing all its religious, racial and economic troubles with a reasonable confidence. The core of the kingdom is thoroughly sound; the "predominant partner" enjoys a great prestige; and full unity, if not achieved, is within sight.

SERBIA: GEOGRAPHICAL SUMMARY

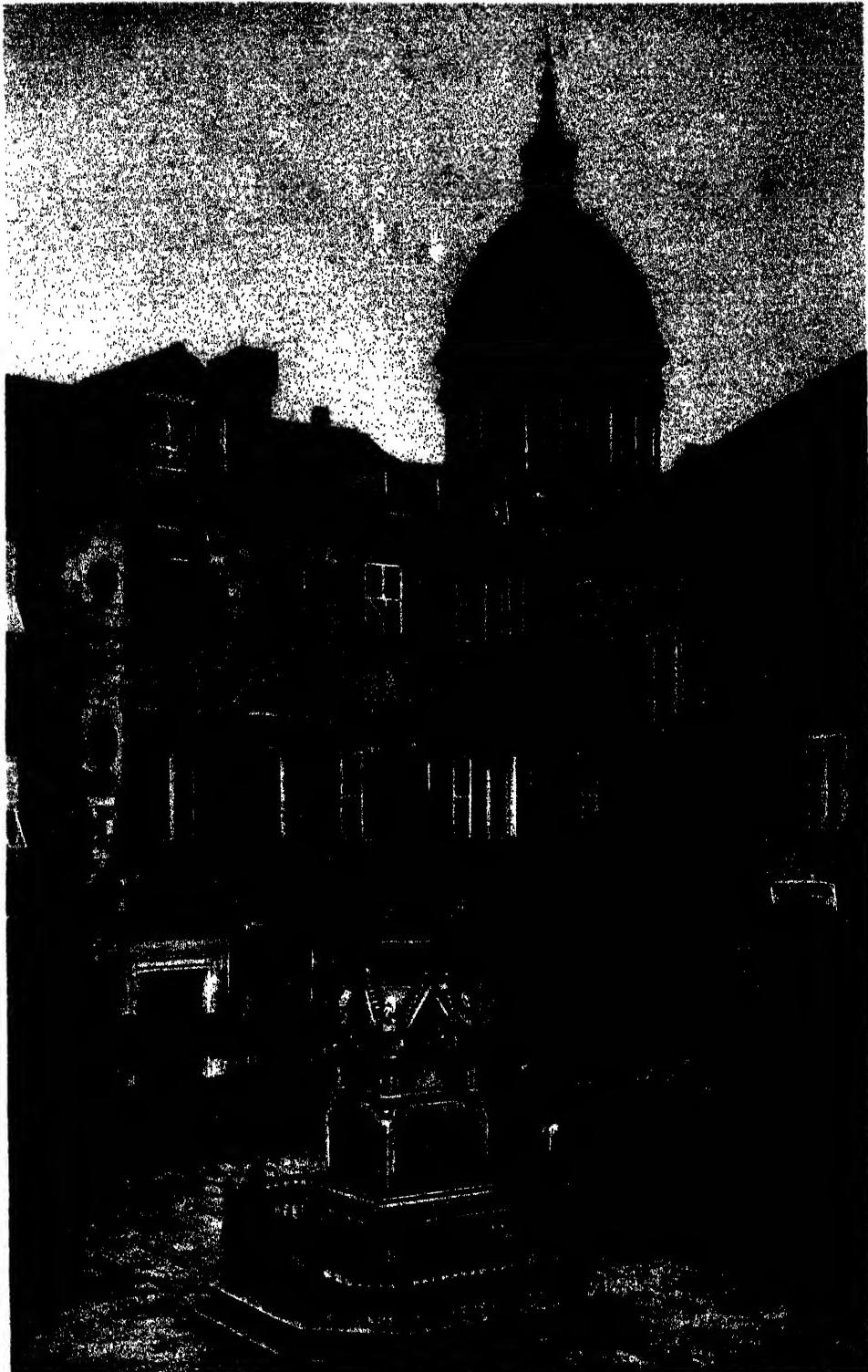
Natural Divisions. The north-western slab of the Balkan Peninsula; fringed by the Adriatic and, at the moment, spread over from the peninsula to the Danubian lowlands in Slavonia and the Backa. The heights lie west and south, and the main drainage is to the Danube, and the general lie of the land concentrates on Belgrade. The Dalmatian littoral is a remote appendage in a different region, being Mediterranean, while the rest is Central European.

Climate and Vegetation. Mainly continental, with extremes of temperature and summer rains. Forested except where cleared.

Products. Plums and pigs. Small amounts of ores.

Communications. Railways radiate from Belgrade. West by the Drave-Sava lowlands to the Adriatic and Italy; north by the Hungarian plain to Buda Pest and Vienna; east by the Danube valley to Bukarest; south by the Morava valley to Salonica, and south-east to Sofia and Constantinople.

Outlook. A peasant people, landholders, and largely self-satisfying, steeped in the habits of communal life, with a great unifying tradition in their history, yet with separatist influences in their several religious adherences to Rome, to Islam, and to the Eastern Church, the Serbs-Croats-Slovenes have yet to demonstrate whether they can form a united folk and develop their resources.



John Bushby

SERBIA. *In the market-place at Ragusa is a statue of the poet Gundulic. The dome of the cathedral appears over the roofs*

E.N.A.
SERBIA. *Ramparts and towers gird Ragusa about where it covers a promontory thrust into the Adriatic. Plague and earthquake in the seventeenth century destroyed the commercial prosperity of this former republic*



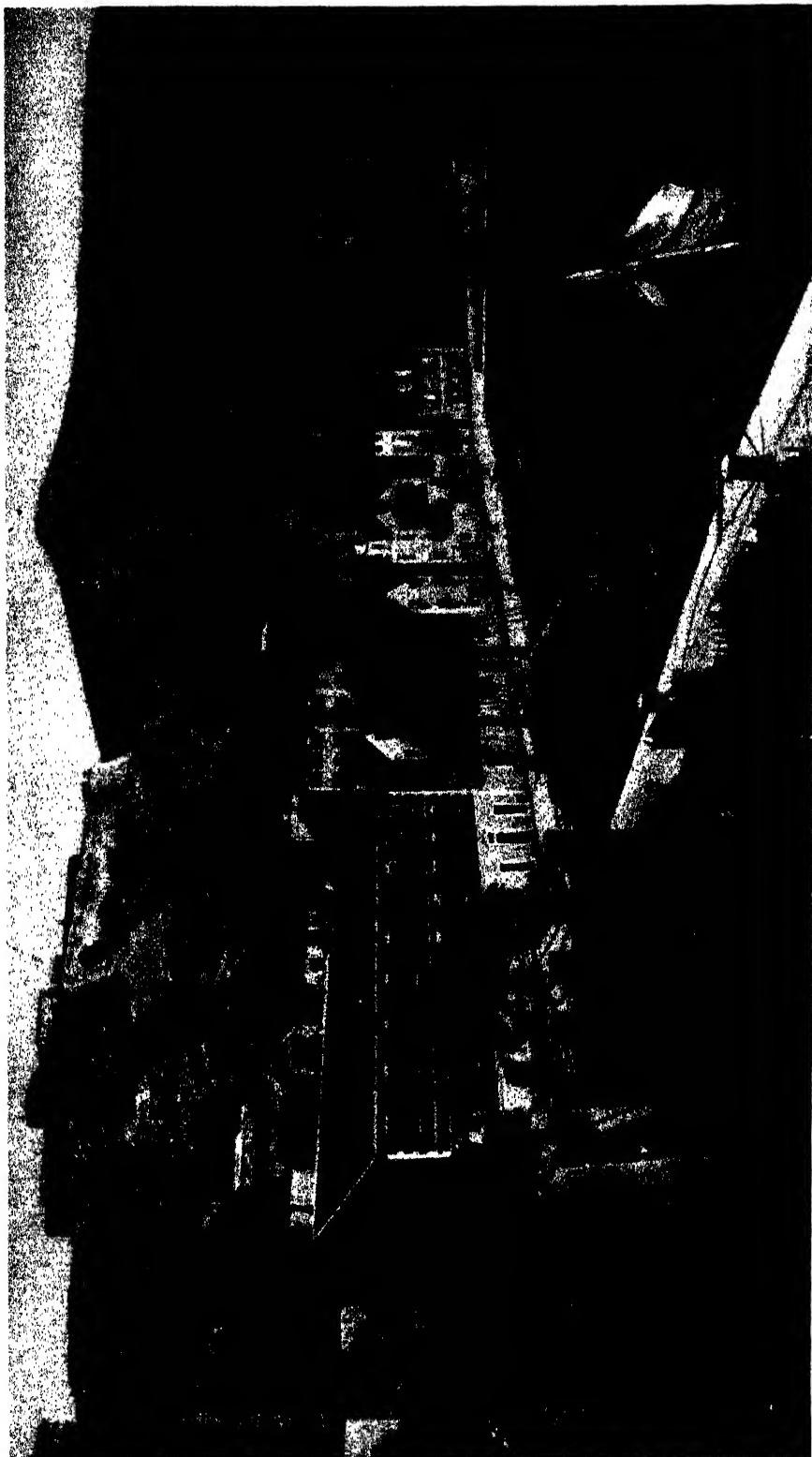
E. S. A.
SERBIA. Šibenico encircles the base and partially ascends the seaward slope of a castle-topped hill at the mouth of the Kerka river in Dalmatia. On the right can be seen the dome of the fifteenth-century cathedral





SERBIA. Cattaro stands upon the shore of the beautiful Gulf of Cattaro. On the eastern side of the gulf there rises an abrupt wall of serried mountains, the craggy outposts of the wild land of Montenegro

SERBIA. Lesina is the quiet port on the island of the same name, and upon a hill above it is Fort Spagnolo, joined to the town with battlemented walls and built by Emperor Charles V. to command the harbour



E.N.A.
SERBIA. In the centre of the palace of Diocletian at Spalato is the Piazza del Duomo, where the magnificent Corinthian columns have been incorporated in the fronts of the houses abutting on one side of the piazza





John Bushby

The Gulf of Cattaro harbours the pilgrimage-church of Santa Maria dello Scapello, on its tiny islet set apart from all the world



John Bushby

SERBIA. Every time Montenegrins go to market in Cattaro they must toil up and down thousands of feet along this zigzag road



SHANGHAI. Its great seven-storeyed pagoda, rising from the plain,
has made famous the Lung Hua temple close to the city.

E.N.A.

SHANGHAI

Greatest Treaty Port of China

by A. Corbett-Smith

Author of "The Evolution of Modern China"

SHANGHAI stands to-day as one of the greatest ports and trading centres of the world.

About the middle of the nineteenth century the site of this mighty settlement was a region of rice and cotton fields, malodorous creeks, scattered Chinese hamlets, with the walled native city hard by frowning across the river. Shanghai spells "contrast," and that is the wonder and interest of the place to all who delight in the study of human nature, the evolution and enterprise of their human kind.

It is but since 1840 that a handful of British sailed up the Hwangpu and took peaceable possession, with subsequent formal renting, of the creek sides and mudflats where now great business houses, modern hotels, theatres and a cathedral stand firmly set. Time was when a man would make his way, gun on shoulder, along a slender native track and flush a pheasant at every step. To-day, that track runs, a broad macadamised road, tree-lined, electrically-lit, past spacious foreign villas ennobled in flower gardens.

China's Eternal Presence

Electric trams, motor omnibuses, taxicabs rattle past and, side by side with them, a Chinese sits stolidly in his man-pulled rickshaw or eight little Chinese women perch, chattering like magpies, upon a man-pushed native wheelbarrow.

That handful of years ago, when three or four men elected themselves into a municipal council, the annual cost of lighting the settlement was some £36. To-day the financial budget of the electricity department approximates 7,250,000 taels, or about £1,250,000.

The first municipal budget of those old city fathers was for £6,250; that of their present-day successors is for a sum approaching £2,500,000.

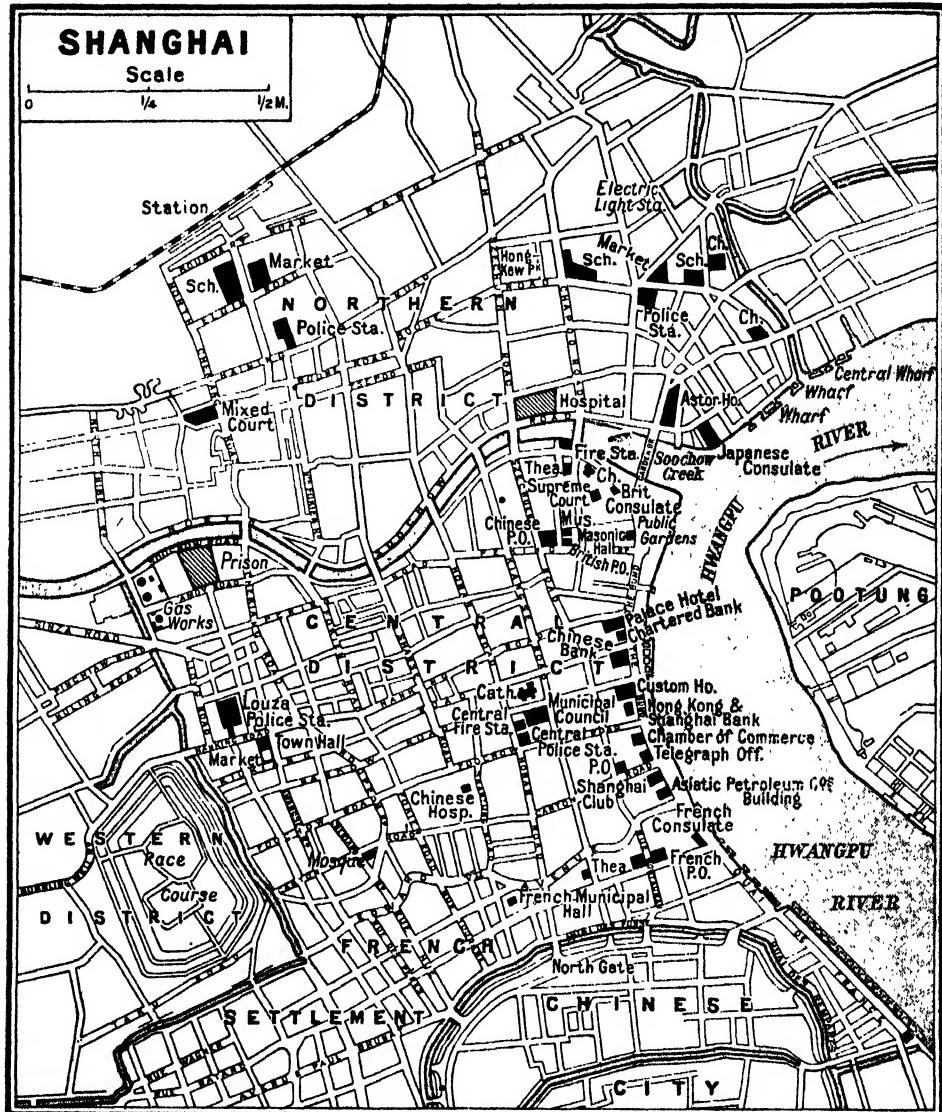
Upon one side of a creek lies China immured in a native city which stands to-day almost as it did when David reigned at Jerusalem; upon the other side lies France, conducting her municipal affairs from a French hôtel-de-ville, her commercial business from typical French business houses, enjoying her sport at a French "cercle sportif" and her "heure verte" at a French café that fronts a spacious boulevard, Edward VII. Avenue.

A Walk along the Bund

Yet across this France of the Far East there stretches the ever-present shadow of the older civilization. The Chinese are everywhere.

Let us move northward across the settlement, and we will walk by way of the Bund, the Thames Embankment of Shanghai. Upon our right lies the Hwangpu river crowded with small craft with, upon the farther side, Pootung—a terra incognita to the folk of Shanghai. The Bund gives us a scene as busy as any in Shanghai. Here the "merchants most do congregate"; exchange brokers dash about from hong to hong; the Customis House is here; so is the Shanghai Club where, at the midday apéritif hour, much of the most important business of the settlement is transacted over the insidious cocktail and gossip is bandied to and fro.

A medley of traffic, native and foreign, throngs the street, and the problem of regulation is becoming as acute as that of Piccadilly.



THE HUGE INTERNATIONAL SETTLEMENT ON THE HWANGPU.

We follow the Bund, passing pleasant embankment gardens, the British Consulate with other offices of British administration near by, and so to the Soochow Creek. Here, if you will, you may take a boat-train (the accent is upon the first word) up country to Soochow and beyond. In days not far distant this formed one of the holiday jaunts of the wild-fowler seeking pleasant week-end sport.

We cross the creek by the Garden Bridge and find ourselves in the Hongkew quarter. A somewhat nondescript

part of the settlement this, unsavoury in places, whence come now and again rumours of unhappy brawls between natives and sailors ashore from their ships. The Americans have a concession here, a consulate and a large up-to-date hotel. But, once again, over all broods the shadow of China.

Now let us visit those three main westward roads, the Canton, the Nanking and the Peking. The first named, wholly Chinese, has come to be termed the Paris of China. Indeed to the Chinese, residents and visitors, it is a

centre of exotic gaiety such as surely is unknown anywhere else within the country's borders.

The Nanking Road is the Oxford Street of Shanghai and the main thoroughfare for foreign residents out to their homes in the west. It was along this road that, a few years ago, electric trams made their first appearance, to the consternation and joy of the native mind. Your Chinese takes hardly to the laws of gravitation and motion, and for years the spectacle of "grave and reverend signiors" trying to board or alight from a moving car was one of the sights of Shanghai. From morning to nightfall their compatriots would line both sides of the roadway and roar with delight over each new tumble into the mud, especially as every unwitting buffoon would invariably crash head first.

Half-way out upon the Nanking Road is the principal race-course, to most residents the centre of attraction

in the settlement. Once it marked the edge of the settlement; to-day you may imagine such a course at Hyde Park Corner. The China pony is the racing animal, and some idea may be gained of his value out there when one learns that £3,000 is by no means an abnormal price for a good "possible." As much as one million dollars will be invested in the "Champions Sweep," the Derby of Shanghai.

In every year there are some thirty to forty days' racing and much of this period is regarded as public holiday. Professional jockeys, it may be remarked, are barred. Beyond the race-course, we enter upon the pleasantly named Bubbling Well Road and villadom. Here also is the charming Country Club with its comfortable club-house and delightful grounds—the resort of rank and fashion each late afternoon.

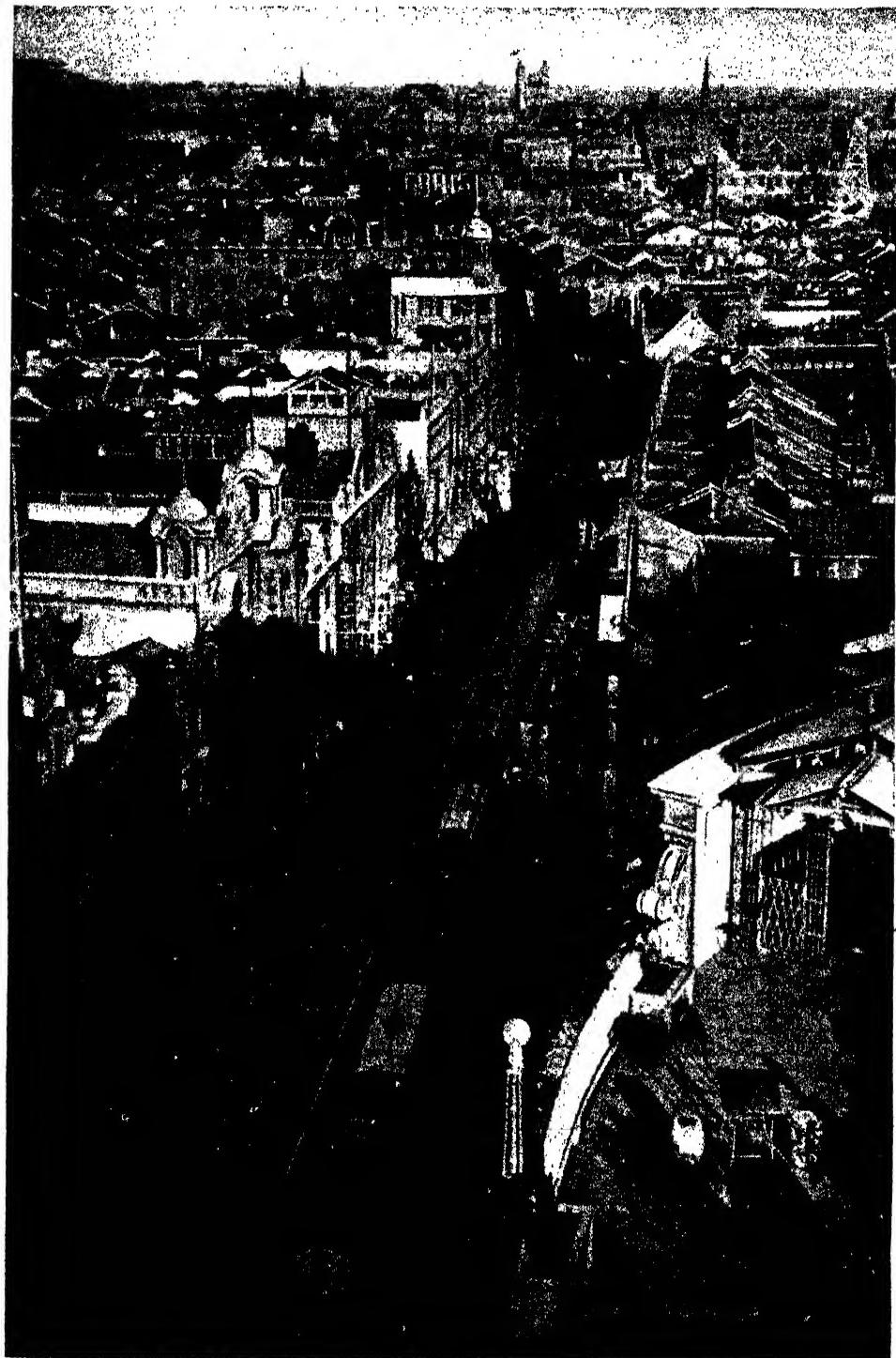
The Peking Road seems for the most part to be inhabited by Chinese, who sell to each other pieces of old



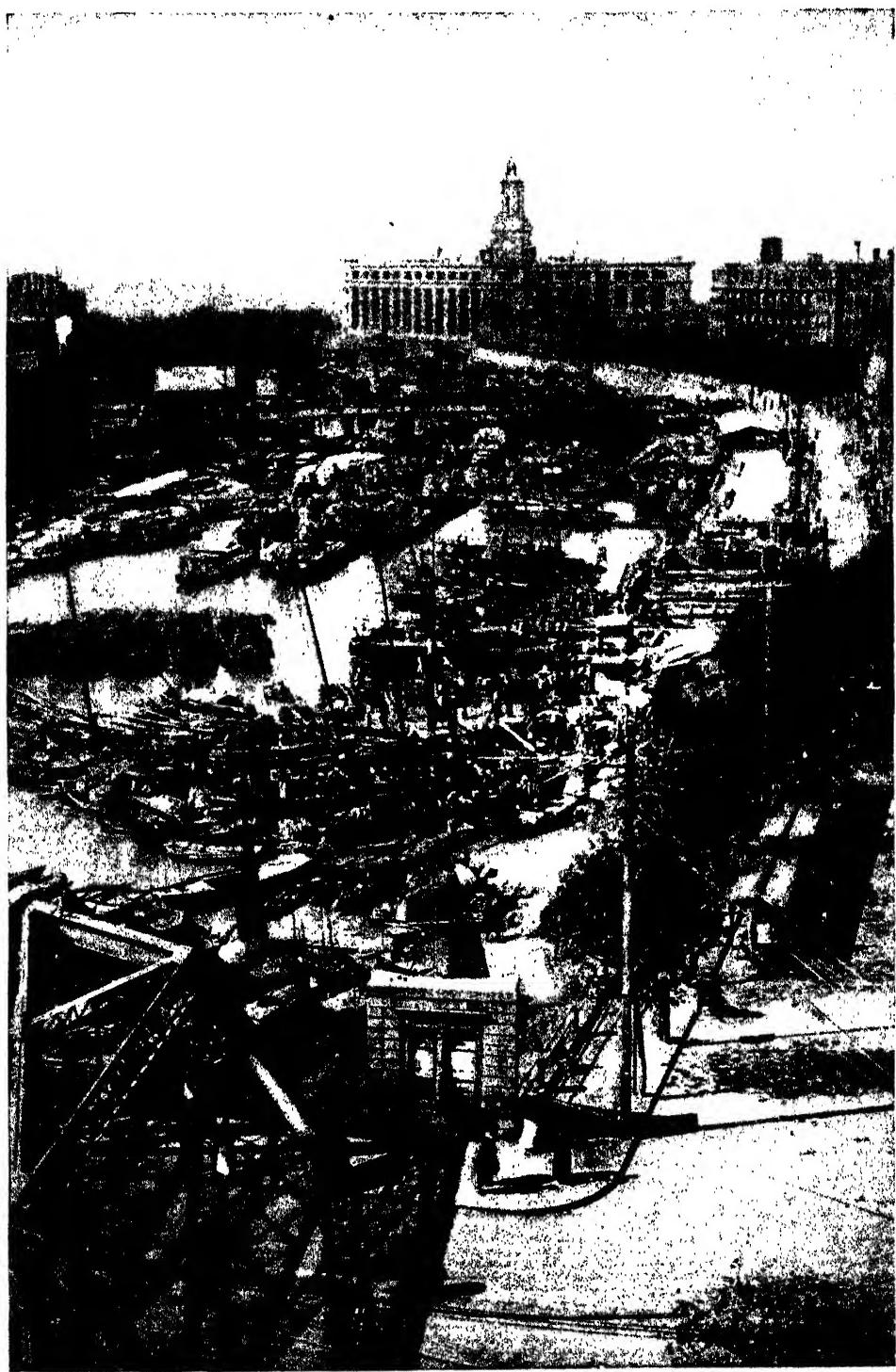
Ernest Peterby

ASTOR HOUSE HOTEL BESIDE THE SOOCHOW CREEK, SHANGHAI

Shanghai has about half-a-dozen magnificent European hotels, of which the Astor House Hotel is the most famous. The great restaurant is capable of accommodating about 300 persons. This hotel is in the British concession, which was ceded in 1843 and contains the American quarter; the French concession, which dates from 1843, lies next to the native city to the south.

*J. E. Cammell***SHANGHAI: NANKING ROAD, THE CHIEF SHOPPING CENTRE**

Nanking Road runs from the Bund out to the race-course through the heart of the Central District. All the principal European shops and many of the best native ones are in this street, where products from all over China and beautiful examples of Indian workmanship can be purchased. There are three systems of electric trams in Shanghai, including one operating within the native city.



J. B. Caminell

COMPACT MASS OF NATIVE CRAFT UPON SOOCHOW CREEK

In the distance is the huge post office building where all the mails are now handled instead of being dealt with at the separate post office of each settlement. The Soochow Creek is a tributary of the Hwangpu, and is crossed at its mouth by the Garden Bridge, a portion of which is visible in the left-hand corner of the photograph. Soochow is about 47 miles west of Shanghai



E. N. A.

BUBBLING WELL IN BUBBLING WELL ROAD, SHANGHAI

Bubbling Well Road lies beyond the race-course and traverses the Western District. In the road is a spring which has been walled round, and from which the road takes its name. At the northern end are the Yü-yuen Gardens, and at the southern the Chang-yuen Gardens, both laid out in the Chinese way. Much of the district is occupied by the residences of European inhabitants



E. N. A.

FAMOUS WILLOW PATTERN TEA-HOUSE IN THE CHINESE CITY

Near the north gate of the native city there is a Chinese tea-house which is popularly believed to be the original representation of the willow pattern. The tea-house stands upon piles in what was once a large pond, and is approached by a zigzag bridge designed to keep out evil spirits. The old city is enclosed by walls which are over three miles in circumference

ironmongery and other bric-à-brac from the foreign houses ; but one is inclined to suspect other and less innocent occupations. Foreign constructed buildings rise rapidly everywhere and it is interesting to observe how the Chinese adapt such foreign construction to native requirements—in their theatres, for instance.

Shanghai is neutral ground for all nations, and every nationality is well represented within its borders. It will be surmised that the task of governing and administering this remarkable and, I suppose, unique little republic is not an easy one.

To hundreds of thousands of Chinese, Shanghai is regarded as a sanctuary in which a man may pursue his lawful avocation without let or hindrance and under a stable government. But still it is Chinese soil, and Young China has very strong ideas of its own upon the subject. The problem of government is therefore very strongly complicated and the utmost tact, combined with an adequate display of strength, has constantly to be exercised by those responsible for the administration.

The Backing of Diplomacy

It speaks volumes for all concerned that little if any friction is ever experienced, except such as can be smoothed away by the interchange of courteous diplomatic notes. And yet the Chinese within settlement limits outnumber the foreigners by about thirty-one to one.

But the city fathers can rely also upon a very material backing for their enforcement of law and order. Shanghai boasts a Defence Volunteer Corps, which is surely as unique as the settlement itself. This comprises some thirteen different detachments or companies, exclusive of H.Q. staff and reserves. Of infantry there are six companies provided by as many different nationalities, including Chinese. In addition there are other British companies, a Light Horse squadron, a battery of Field Artillery, Engineers and an

armoured car section, a machine-gun company and—the Shanghai Scottish. All take their duties very seriously. There is, in addition, an efficient and well equipped police force of three sections, British, Chinese and Sikhs ; and one of the first things that will astonish you arriving in Shanghai is the sight of our old friend, a London "bobby," controlling the street traffic. Our city of contrasts !

An Interesting Charter

The legal code upon which foreign settlement in Shanghai is based is termed the Land Regulations. As a document it is of great interest, commendably brief and concise but comprehensive. The contracting parties to it are the Chinese government and the court of foreign Consuls, with the municipal council acting in conjunction as an interested advisory party.

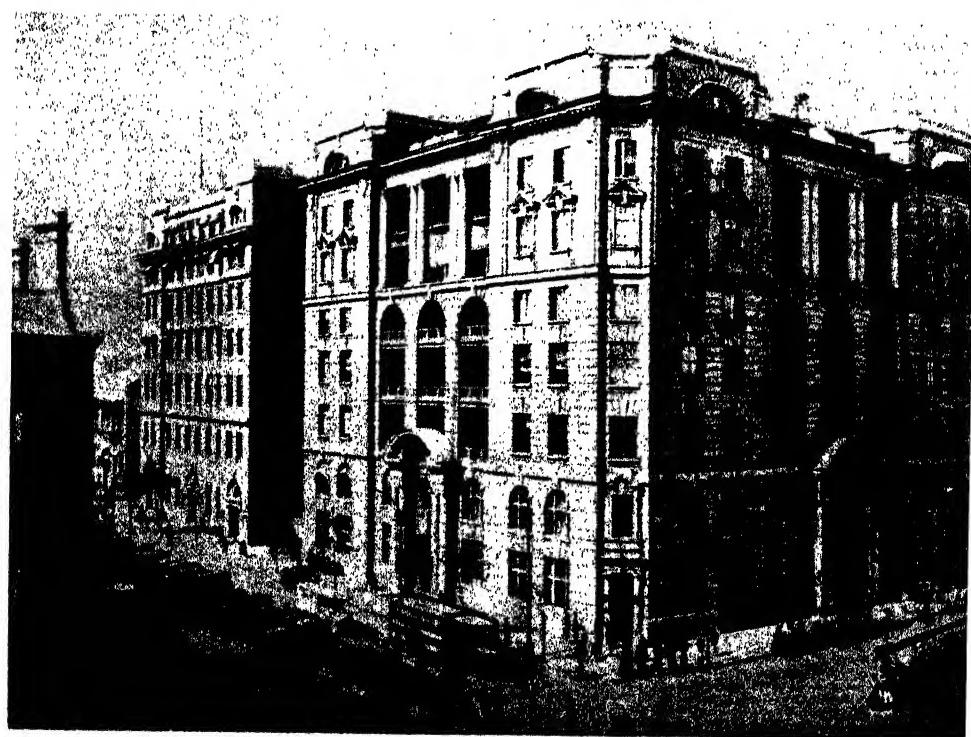
One would like to dwell upon this legal code and its working, also upon many other aspects of the local government, notably the several courts of law, the education, foreign and native, conducted under the direction of the council, the admirably directed and up-to-date public health department and the thousand and one matters of human interest, wherein every day the council touches upon the life of the community and keeps a fatherly eye upon its very mixed family. But we must pass on and consider the social aspects.

Where Everybody Works

In foreign Shanghai everyone works, not only the men but their women folk, too. The settlement is one of the most democratic places in the world.

Every man is taken at his own intrinsic value ; anyone coming out with noteworthy letters of introduction is regarded with grave suspicion until he proves his mettle. Everyone works and everyone is expected to contribute, if possible, something to the social life of the community.

The women engage in business of their own or as employees in the foreign houses



SHANGHAI'S IMPOSING FRONTEAGE UPON THE BUND BY THE HWANGPU—

The upper photograph begins with the building of the North China "Daily News" on the extreme left; next comes the Chartered Bank, followed by the Palace Hotel. A little to the right is the Bank of China, with two columns in its façade, and then in the background stands the clock tower of the Post Office. Over the mouth of Soochow Creek is the Garden Bridge with the Japanese Consulate to the right.



J. E. Cammell

—STRETCHING FROM THE FRENCH SETTLEMENT TO SOOCHOW CREEK

In the lower photograph the War Memorial stands at the end of Edward VII. Avenue, the boundary of the French Settlement; at the corner is the Asiatic Petroleum Company's building, succeeded by the Shanghai Club. The great domed structure houses the Hong Kong and Shanghai Bank. On the opposite bank of the river the suburb of Pootung spreads with its shipyards, docks and foundries



E. N. A.

LOOKING ALONG THE BROAD TREE-LINED BUND AT SHANGHAI

The Bund really begins as the Quai de France in the French settlement and continues along the bank of the Hwangpu river until it reaches the Soochow Creek at the Garden Bridge. The Customs House, the Chamber of Commerce, the Shanghai Club and many of the business houses are all on the Bund, which is over a mile in length and has the Public Gardens at its northern extremity



E. N. A.

SIGNS OUTSIDE THE SHOPS IN SHANGHAI'S OLD WALLED CITY

The native quarter became a city in 1340, and the walls were built in 1554 as a defence against Japanese pirates. The City, as it is called, in contradistinction to the foreign concessions, has changed but little for many centuries, except that telephones have been installed and pure water is supplied by a Chinese company, though many of the inhabitants still prefer to drink the river water

or find work in one or other of the many educational or charitable enterprises that exist in Shanghai.

Another interesting feature of Shanghai social life is that nearly everything is "amateur" or voluntary. The concerts, the theatres and so forth depend almost wholly upon local amateur talent. But of so high a standard is this that grand opera is frequently staged, and it is often possible to witness local performances of big London successes within three or four months of their original production. And world-famous artists, like Kreisler and Calvé, have been visiting Shanghai in increasing numbers.

Foreign Shanghai lives its own life, and it is, one may note with some regret, a very self-contained life. There is little or no thought for the Chinese, and very, very few foreigners ever think of making even the most cursory study of the language. The time-table of a day in the life of an average man may be suggested.

The Day of an Average Man

An early morning ride (everyone rides and keeps a pony); the office by 9.15; at noon all business closes down until 2 p.m.; office from 2 to 5; recreation and games; dinner at about 8. The standard day is varied by the spells of public holidays. A race meeting closes business for three days. If everyone works everyone certainly also plays, and it may be noted that Germany owed her striking commercial success in the Far East in great measure to her men's capacity and determination in work outside business hours.

The climate of Shanghai is, on the whole, good. July, August and September, with their enervating damp heat, are most trying months. The autumn and spring are delightful, and the winter is not cold.

Of sport and games there is infinite variety, for all possible tastes. There is even an annual regatta held opposite a village most felicitously called Henli. Cross-country mounted paper-chasing is

the winter amusement par excellence, and a man must be a good rider to win a hunt and so his "pink" coat. The sport is considered too dangerous for women to indulge in.

The interest of Shanghai lies primarily in the unique character of its international republic; in its striking admixture of East and West; in its internal factions and dissensions, foreign no less than native; in the eternal impassivity of the Chinese so closely in touch with Western customs and modes of thought; in the system of municipal government with its multifarious activities such as are almost unknown elsewhere.

Doubtful Future of Shanghai

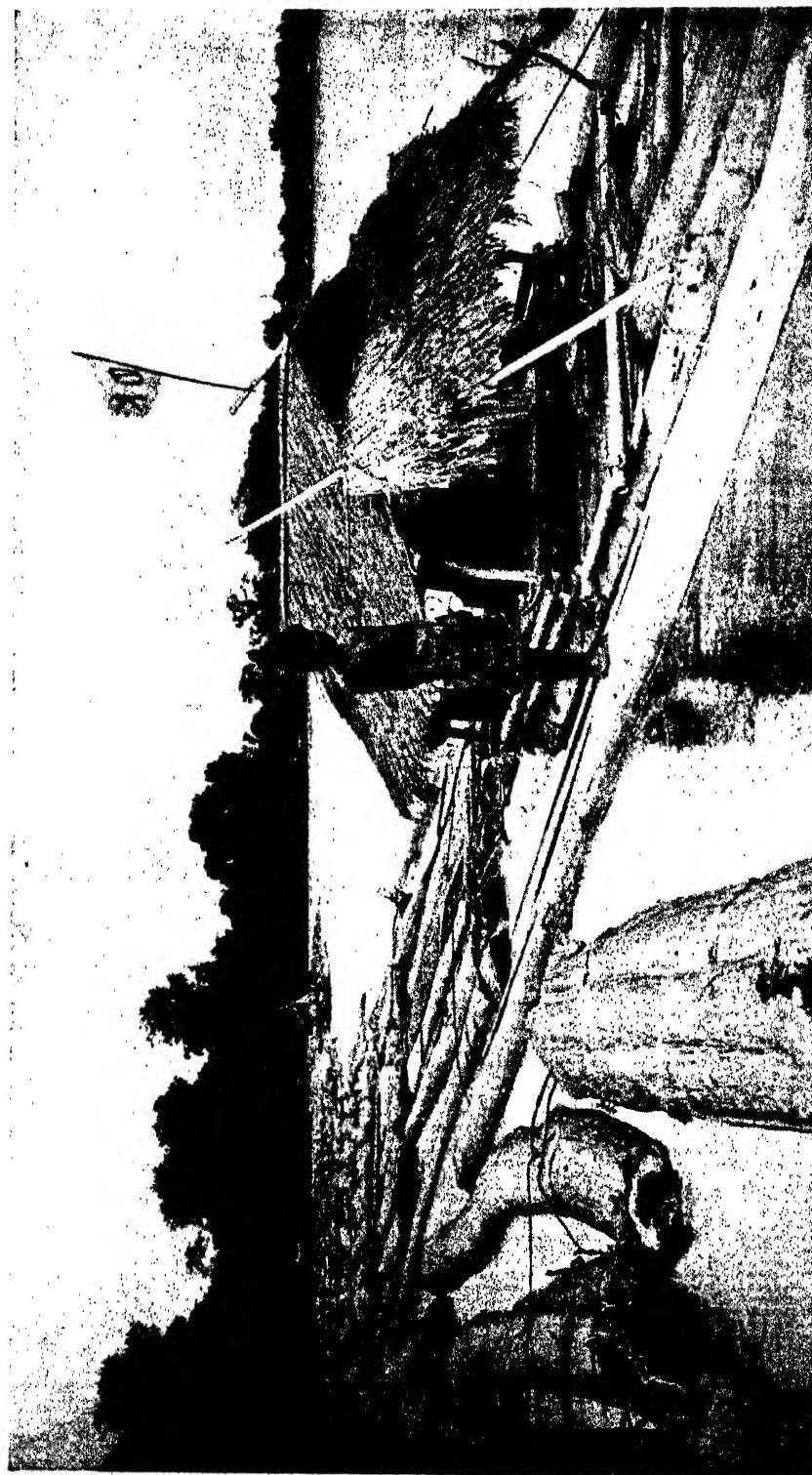
But to appreciate those points of interest one must needs live and work in Shanghai; and then, coming as one will to take them all as everyday matters, their significance will very probably be lost. But the human comedy ever remains for those with the eyes to see and the wit and sympathy to understand.

What is to be the future of Shanghai no one can foresee. The question of extra-territoriality ever runs a quiet current of thought in the Chinese mind. And who can wonder at it? The waves of Western civilization beat stormily upon the rock-bound coast of Chinese conservatism but with as little apparent effect as that of the North Sea breakers upon Flamborough Head.

A Thought for the European

The Chinese were an old, old nation, highly civilized a thousand years before ever Julius Caesar landed his legions on the English coast. To the Chinese time does not exist. They may well be still one of the great nations of the earth when London and England and all its civilization are no more than memories of history.

In the meantime, Shanghai goes about its work and play and lives its narrow, circumscribed life, one of the most interesting experiments of modern time.



RAFTS OF TEAK LOGS ON THE MENAM RIVER, EN ROUTE FOR THE TIMBER MILLS OF BANGKOK

The teak-tree is a native of Indo-Malaya and is found abundantly in the forests of north Siam, where it grows to an immense size attaining a height of 100-150 feet. Although some of the teak forests of Siam have been exploited from time immemorial, it was not until towards the end of the nineteenth century that the Siamese trade in teak assumed important dimensions. The teak logs are floated out from the forests on the annual floods—the supply often depending upon the amount of rainfall in the interior—and rafted chiefly down to Bangkok, whence, after being sawn into planks, squares, scantlings and shingles, they are exported

SIAM

The Land of the White Elephant

by Sir George Scott

Late Member of Anglo-Siamese Boundary Commission

SIAM has an area of roughly 200,000 square miles. In shape it is a sort of square, deeply dented on the north-east, where the Mekong river comes cranking in; and there is a kind of tail where it stretches defiantly down the narrow Malay Peninsula to have a frontage on the Indian Ocean. Apart from this tail, it lies between 12° and 20° N. and 98° and 105° E.

Central Siam is an almost perfectly level plain and forms what may be called the hollow of a saucer, with the rim of the central ridge of the Malay Peninsula on the west, irregular tumbled ranges on the north, the elevation of the Korat plateau on the east and the muddy shores of the Gulf of Siam on the south.

Alongside it is another saucer-like depression which forms eastern Siam. This lies in a circle of hills and is dismally water-logged in the rains and scorched into brick and dust in the hot weather. The two may be taken to represent a cheese and butter dish, with a pronounced rim in the arid Pnom Dang range which forms the boundary with Cambodia, and a chipped edge where low hills and a strip of flat land reach to the Mekong river.

Needy East and Well-fed South

To make up for the inhospitable expanse of the eastern division there is lush, almost over-luxuriant vegetation in southern Siam, covering the narrower part of the Malay Peninsula. This is an alternation of hills and valleys, with several broad open plains on the east coast. In the east the inhabitants have to work hard for their living;

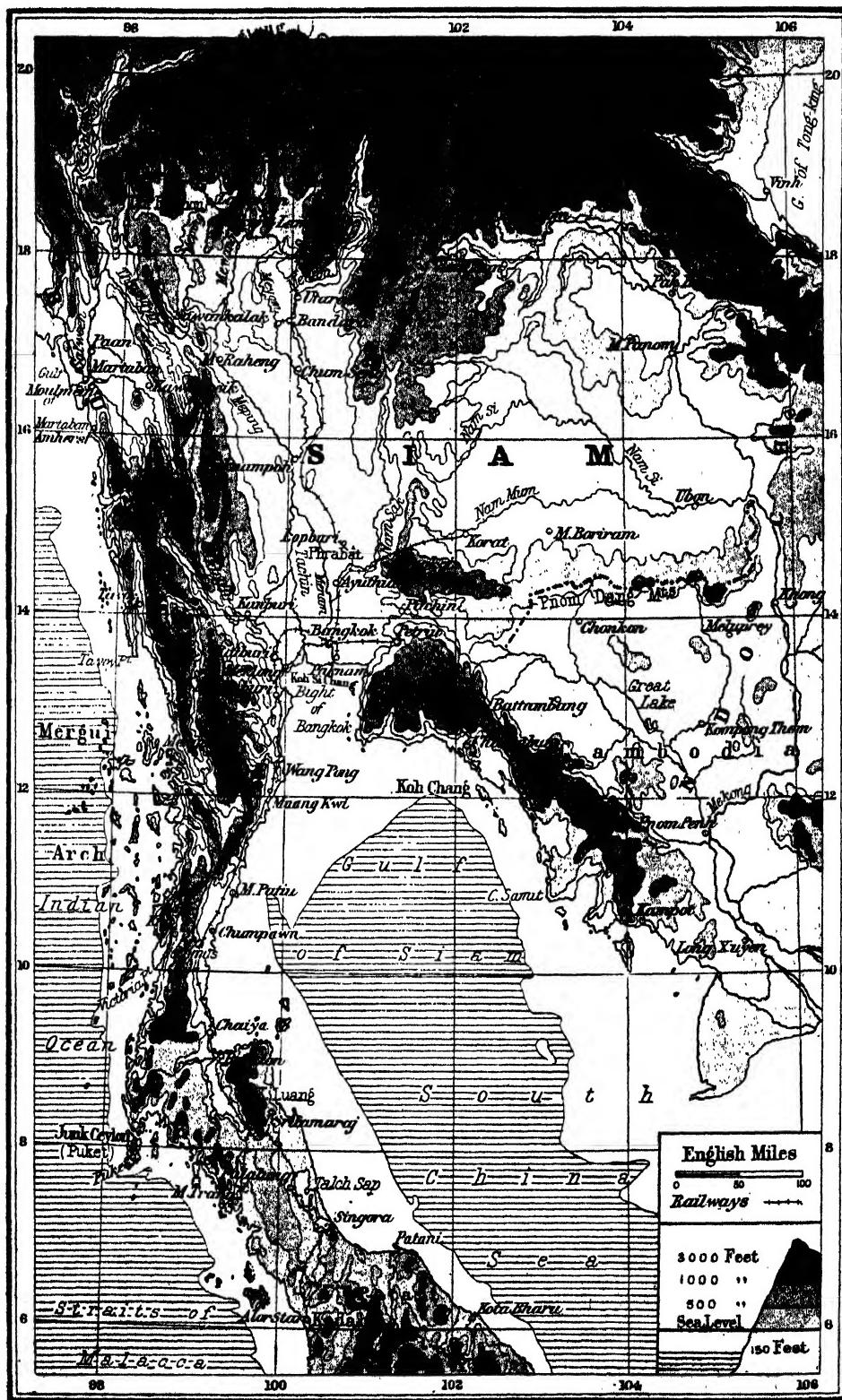
in the south they live in well-fed ease and are not even energetic enough to be good Moslems, as they ought to be, since the majority are Malays.

Lengthy River Boundaries

The northern division is equally well wooded, but the forests are mostly deciduous. The ranges which bend south from the eastern end of the Himalayas and are separated by the deep gashes of the Salween, the Mekong and the Yangtze river valleys—the three of them for a long distance not much more than 100 miles apart and with banks 8,000 feet high and more—fall away as they stream south and are frayed out into parallel ranges of more moderate height, like the tufted end of a cow's tail. They are covered with dense forest jungle, but spaced between the ridges are flat-bottomed valleys where the bulk of the inhabitants live. In the hills are only scattered settlements of wild tribes.

The Mekong river forms the boundary on the greater part of the east and north, with the French state of Laos on the other bank, except on the south-east, beyond the Pnom Dang mountains, where a corner of Cambodia thrusts in and on the north-west where a somewhat modest stream forms the frontier with the British Shan state of Kengtung.

From this the boundary runs along the watershed between the Salween and the Meping rivers, edges into the greater river, and for 60 miles along it faces Burma; then it runs up the Thaungyin river, follows the spine range of the Malay Peninsula down to Victoria Point at the isthmus of Kra,



SIAM, A WEDGE BETWEEN BURMA AND INDO-CHINA

where there was at one time the idea of digging a canal, and so for 350 miles down the sludgy and island-studded coast of the Puket division, along the sea.

Again it rises to the central mountain range, follows it along the skirts of Keddah and Perak and drops down to the Gulf of Siam with Kelantan and the Federated Malay States generally to the south of it. The sea is the southern boundary and from Patani round to Cape Samit the coast-line measures quite 1,000 miles. There is abundant proof that there has been an upheaval of the land in the remote past and that towns now far inland were on the sea coast. To this has been added the alluvium brought down by the Menam. Consequently the shore is pushing south and the gulf is shallow.

The coast, however, is very varied. At the head of the gulf where the

Menam pours in slime all the year round, mud flats fade imperceptibly into a dirty uninviting sea. The joining point of the sea and the land is hidden by belts of mangrove swamps depressing to look at and teeming with mosquitoes. Here and there scattered clearings show that firewood has been cut for Bangkok kitchens, and clumps of nipa palms with their handsome fronds offer some relief in addition to supplying efficient thatch from the foliage and spirit—very strong drink—from the nuts.

The mouth of the Menam does not differ from the deltas of all considerable rivers in the East, but fortunately other parts of the coast-line are more pleasant to look at. Down the eastern side of the gulf there are sandy beaches ; the sea is of a Mediterranean blue ; cultivation alternates with jungle-covered hills, sloping up from the shore ; and in some places sheer cliffs rise leading up to the



E. N. A.

GREAT BRONZE BUDDHA AMID THE RUINS OF OLD AYUTHIA

Founded in 1351, Ayuthia, the former capital of Siam, stands on an island in the Menam, 42 miles by railway north of Bangkok. The relics of that proud city which formerly played so important a part in Siam's history are now centred mainly in the ruins of pagodas and palaces. This famous bronze image of the Great Ascetic is 40 feet high, and was wrecked by the Burmese about 1765.

Patat range, parallel to the gulf, and great numbers of rocky islets serve to form sheltered bays. A group of these, known as Koh Si Chang, is used as a harbourage for vessels of too great a draught to proceed up the Menam river to Bangkok.

On the west of the gulf, in southern Siam, the prospect is equally attractive. High and precipitous headlands alternate with wide flat shores where the goat's foot convolvulus, with its perpetual pink flowers, sends out trailers over the sand to extraordinary distances ; and behind rise rank upon rank of graceful palm-trees. The Indian Ocean side is not

quite so picturesque, but it has some well-protected harbours, filled with the swarms of junks and other craft which have taken the place of the old pirate vessels called " prahus."

On the east coast of the peninsula there are admirable sheltered roadsteads at Patani, Bandon, Chumpawn and Singora, where there is a shallow inland sea, 50 miles long and studded with hundreds of islets.

Siam as a whole is a basin, but the fringes have some fair-sized ranges. In the north these vary from under 1,000 feet to over 4,000, but there are several lofty peaks of which Doi Intanon,



Topical

MOTLEY NATIVE CRAFT ON THE KLONG KUT MAI

The highways of Siam are its natural and artificial water-courses ; the inhabitants dwell chiefly upon the banks, and in many instances these riparian villages extend almost uninterruptedly from town to town. The people, too, are exceedingly aquatic in their habits, and the waterways are thronged with varied craft, for despite railways, produce is mostly water-borne.



Ewing Galloway

IRRIGATING A RICE-FIELD IN THE UPPER MENAM VALLEY

Where the rainfall is insufficient to keep the crops under water the Siamese dig irrigation ditches and force the water on to the fields by means of a rough type of paddle-wheel which is operated by a tread-mill. The wheel in the photograph is being turned by a woman, as nearly all hard work is performed by the female sex in Siam under male superintendence.

8,450 feet, is the highest; and there are two others of over 7,000. Near the northern capital, Chieng-mai, Mounts Pachaw (5,900) and Sutap are sufficiently conspicuous. The Patat range on the Chantabun coast has peaks of over 5,000 and 4,000 feet. The main range of the Malay Peninsula averages between 2,000 and 4,000 feet, but south of Muang Kwi, where Siamese territory is no more than ten miles wide from the hill-crest to the sea, there is a peak, Kao Luang, 5,800 feet high.

There is only one great river in Siam, the Menam, for though the Mekong is vastly greater it only marks the frontier, for some 1,000 miles. The churlish policy of France long forbade Siam to exercise military or police authority inside a zone of about fifteen miles from the river, but by a Franco-Siamese treaty in 1925 this prohibition was withdrawn.

The Menam is made up of four rivers, the Meping and Mewang, which join near Raheng, and the Meyom and Menam, which join at Chum Seng. The two streams thus formed create the Menam Chao Phya at Paknampoh, 140 miles from the sea and about twice that distance from their sources. It is navigable for vessels of 1,500 tons burden, and, if it were not for the bar created by the meeting of the sea with the silt-laden river water, would admit much heavier tonnage.

The only other river of any length is the Nam Mun. It rises on the 600-feet-high plateau of Korat and covers 300 miles before it reaches the Mekong, but it is distinctly unsatisfactory, notwithstanding that it has quite a number of tributaries. These, as well as the main river, are swirling floods in the rains and in the dry weather often



TEAMS OF UNGAINLY WATER BUFFALOES PLOUGHING A FLOODED RICE-FIELD IN SIAM

Despite the archaic agricultural implements and methods employed by the Siamese, they obtain good harvests. The cultivation of rice is the chief industry of the country, and it would be almost true to say that 99 per cent. of the population outside the large towns are engaged in the industry in one way or another.

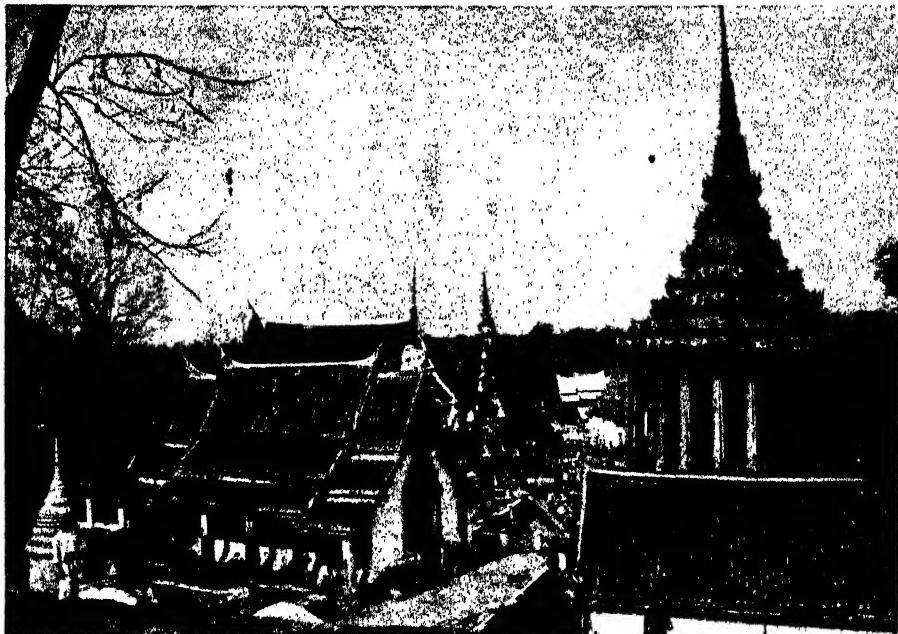
have no water in them at all over a stretch of 30 miles.

Central Siam is nearly all alluvium, with clayey soil and strata of quartz sand overlying limestone beds in the north and west, and marine sand in the middle. There has been a general upheaval of the land which is thought still to be going on and old sea-beaches are not uncommon. Otherwise the chief geological characteristic is the universal prevalence of limestone rocks, resting on sandstone. In many parts the limestone is highly crystalline and here and there quite good marble has been found. The high tilting of the limestone beds has formed in several places, more particularly in the Malay Peninsula and the north, lines of abrupt cliffs and fantastic peaks.

In the south part of southern Siam there are only two seasons: the hot weather and the rains. The hot weather lasts from February to August and the rains spread over the rest of the year, with December as the wettest month. The backbone range of the Malay Peninsula draws to itself most of the moisture of the south-west monsoon, and consequently in December rain very seldom falls in central Siam.

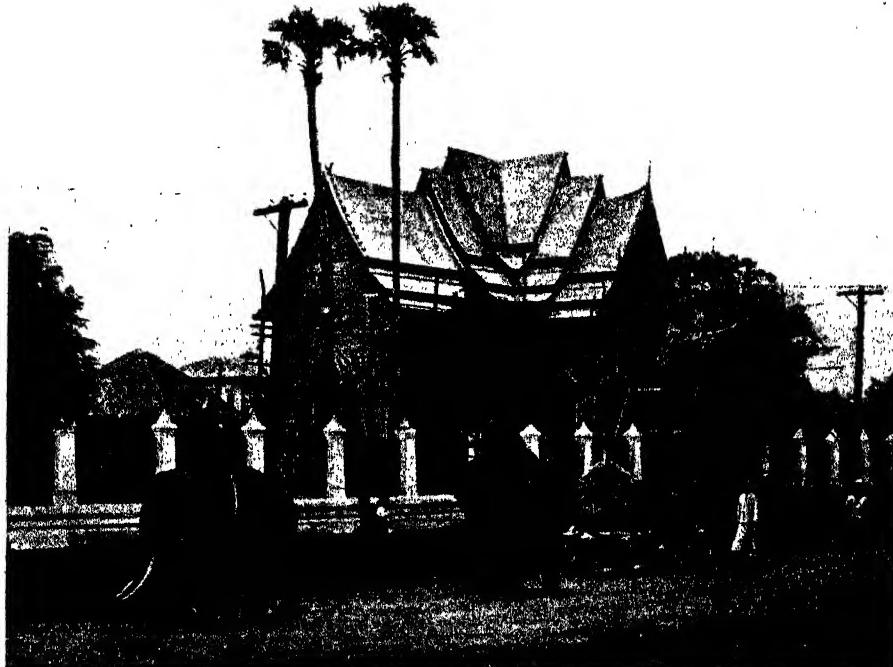
Nevertheless there are, as in India, three distinct seasons in central, northern and eastern Siam. These are the hot weather, the rains and the cold weather, though visitors from the north temperate zone are apt to be sceptical about the cold. The first begins about February or March and lasts out May; the rains go on till October; and the cold weather technically covers the remaining four months. The thermometer declines to recognize the cold and sometimes records a maximum of 92° F. and practically never goes below 54°, but when there is a consistent north-east monsoon the movement of the air almost justifies the title.

In the north among the hills and narrow valleys radiation, or condensation, causes a greater range of temperature, and with a mean maximum of several degrees higher, and a mean minimum



SIAM'S PILLARED TEMPLE WHICH SHELTERS BUDDHA'S FOOTPRINT

From the very earliest times the adoration of the Sacred Footprint has been a feature of the Buddhist religion. The Phratab, or "Sacred Foot," in the hills east of Lopburi, Central Siam, was discovered early in the seventeenth century; now enshrined in a temple, surrounded by carved pillars and surmounted by a tapering seven-eaved roof culminating in a spire, it is visited annually by pilgrims.



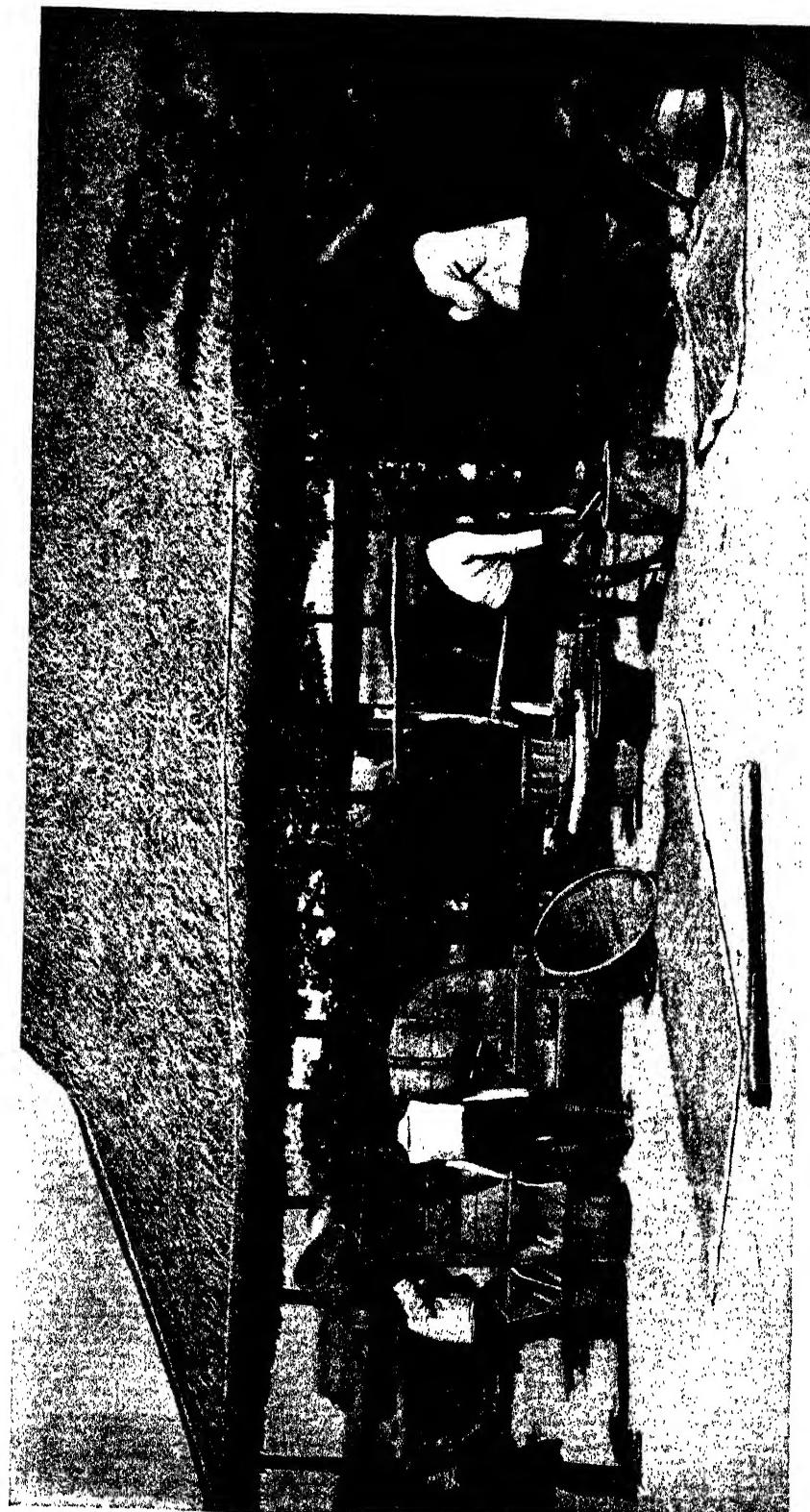
TRAINED ELEPHANTS AT WORK IN A SIAMESE TOWN

In the plains and mountains of Siam wild elephants are still numerous. While those of the highlands are left to the sporting instincts of the hill-folk or of any chance huntsman, those of the plains are under the supervision of a special elephant department of the government. After the completion of their training, the captured elephants are put to many uses, and are particularly valued as draught animals.



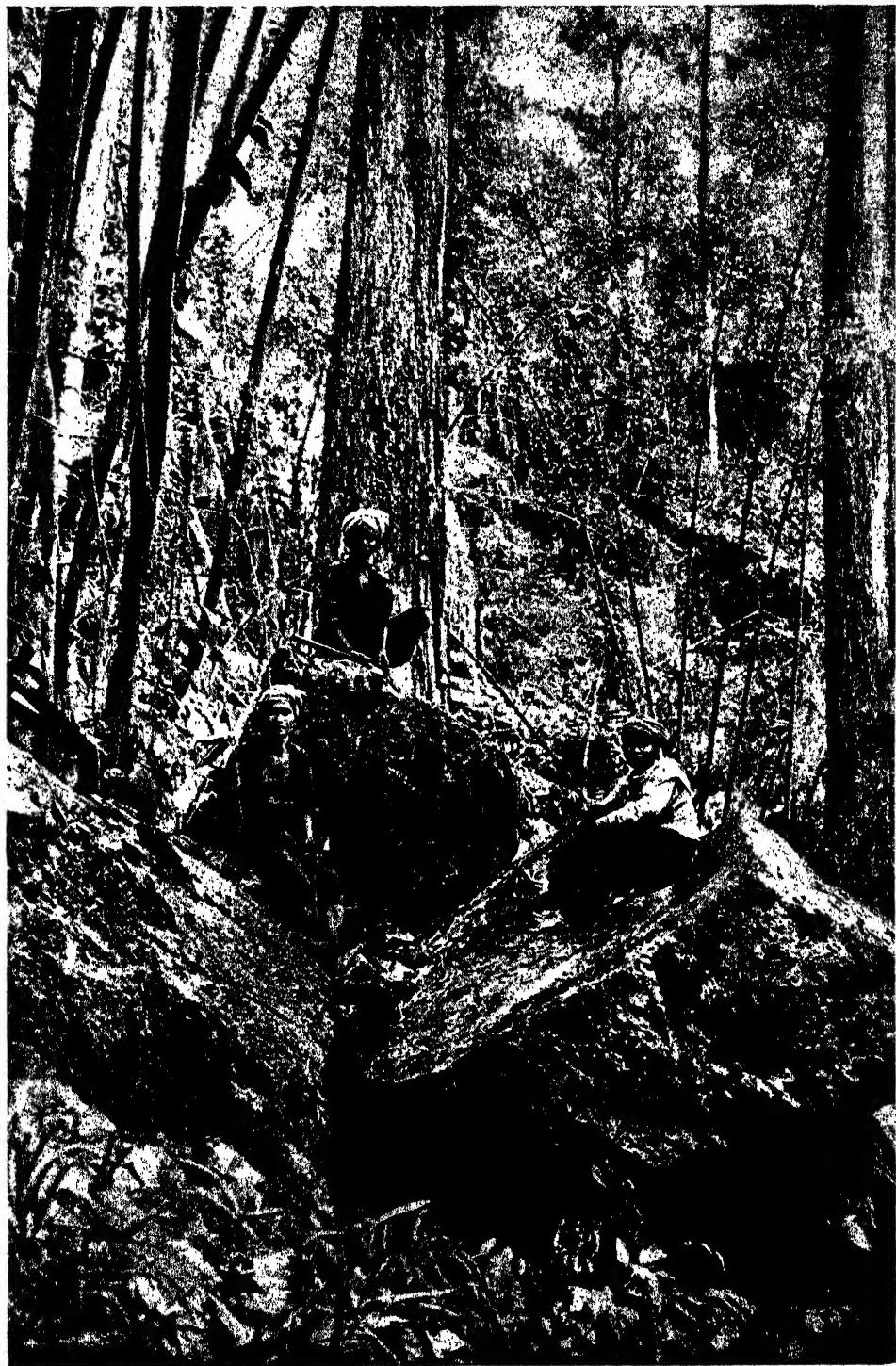
O. A. FRY
ELEPHANT CATCHING IN SIAM : THE WILD HERD SHEPHERDED BY TRAINED TUSKERS RETURNING TO THE PLAINS

The periodical elephant catchings, held near the modern city of Ayuthia, are patronised by royalty and crowds of holiday-makers. The elephants, collected in their far-away feeding grounds, are shepherded by trained servitors into a stoutly fenced enclosure. Here the young animals selected for capture are slowly pursued by the catchers who, seated on docile tuskers, watch the opportunity to pass a noose over their hind feet; this done, the rattan cable is made fast to a stout palisade. Sufficient captives made, the herd is driven back to the feeding-grounds, while the prisoners are led to the stables to begin their education in the service of man.



SIAM : PREPARING RICE FOR EXPORT IN ONE OF THE OLD HAND-OPERATED MILLS

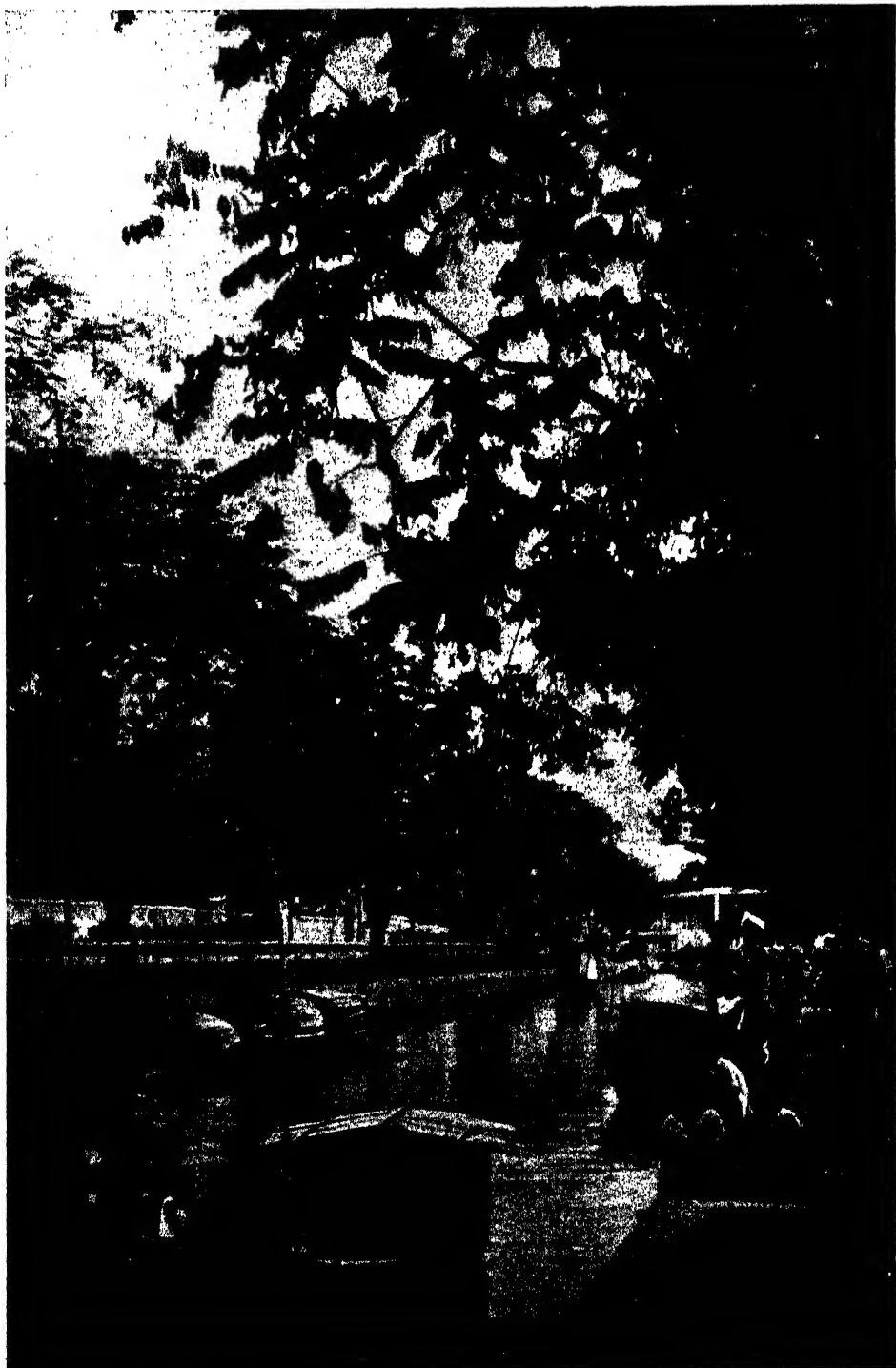
The majority of the machine-operated mills are about Bangkok, but here are shown more primitive methods. In the centre is a rough sifter consisting of a basket, attached to a swinging pole, within another basket; on the left two men are pounding the rice in a mortar with wooden mallets. Siam is called "the kingdom of the free," by its inhabitants, but forced labour is still used. A Poll-tax, which varies according to the district, is gradually replacing the forced labour, and Chinese coolies perform the greater part of the skilled and unskilled work in the south, especially in the mills and mines. Over 6,100,000 acres are under rice



W. A. Elder

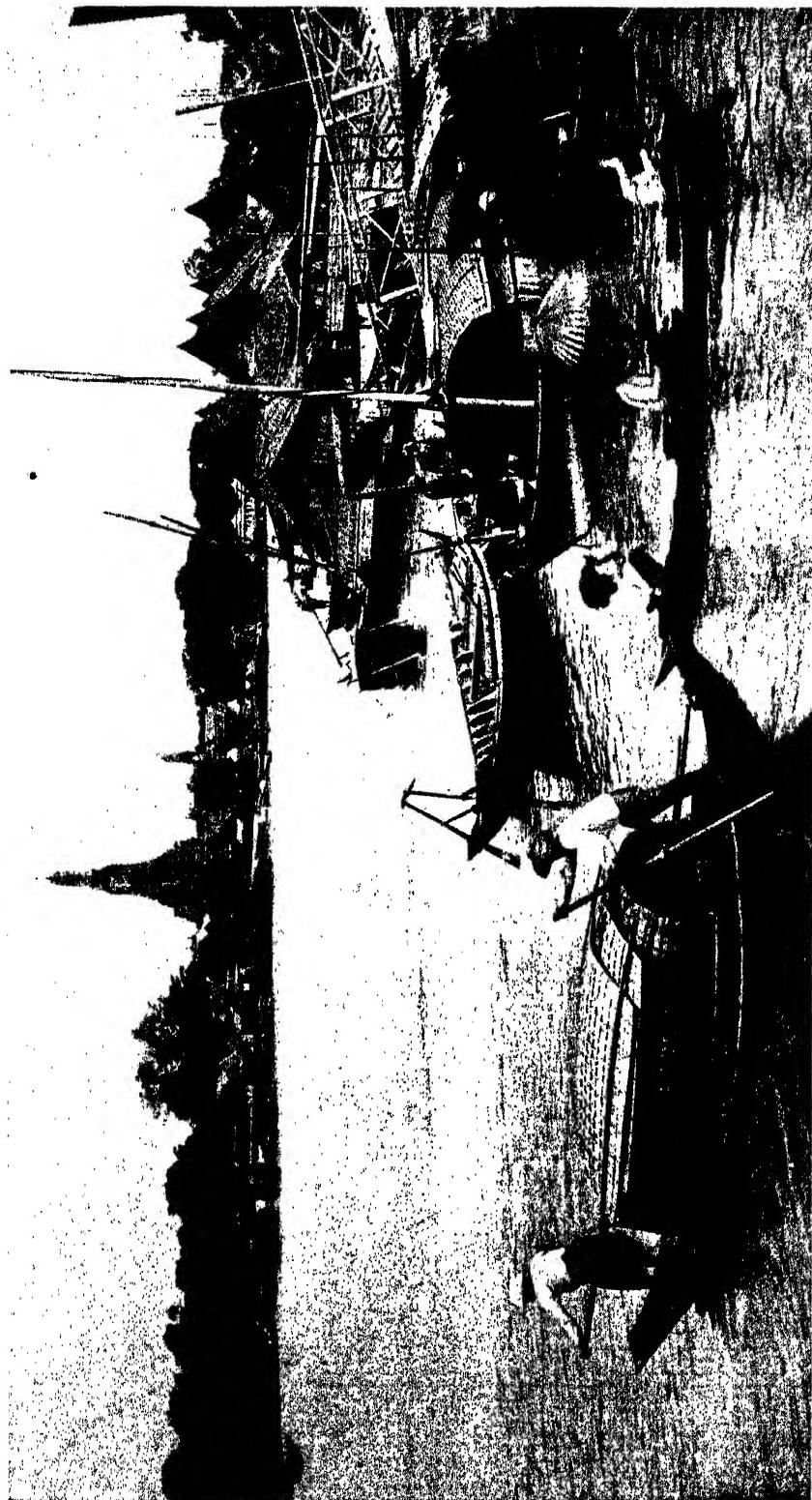
KAMOO MEN GIRDLING TEAK-TREES IN ROCKY SIAMESE COUNTRY

The teak is largely cultivated for its timber, which is one of the best and most durable known, and exceedingly valuable in shipbuilding. The first process in falling is to "girdle" the tree, when a deep ring is cut around the base of the trunk; this causes the tree to die, and after standing for two years it is sufficiently dry and seasoned to be cut down.



MODERN CANAL FRINGED BY RICH FOLIAGE IN THE CAPITAL

A series of parallel canals traverses the plain of central Siam at right angles to the river courses. These artificial waterways are of immense value as the principal means of traffic and communication between the capital and distant towns and districts which otherwise would be difficult of access. Roads are almost non-existent and highly impracticable owing to constant flooding.



ON THE BANKS OF THE MENAM RIVER, SIAM'S GREAT NATIONAL HIGHWAY, AT BANGKOK

The Menam river rises close to the country's northern frontier and flows tortuously in a southerly direction to the head of the Gulf of Siam. About 20 miles upstream is Bangkok, accessible to vessels which are able to cross the sandbanks at the river's mouth. With its tributaries and branches, the Menam is the only great river system in Siam, and upon its banks, in pile-supported houses and floating homes, dwell innumerable families, for whom the noble stream constitutes Siam itself. In the background is the profusely adorned pyramidal tower of Wat Chans, one of Bangkok's many Buddhist temples.

of much the same lower, there is a superficial justification for complaints of sweltering and shivering. In southern Siam, on the contrary, the range is very slight, and there is a flat temperature in the eighties all the year round.

Eastern Siam accentuates the figures of the north. The low hills, which hem it in, slow down the cooling breezes; the laterite soil emphasises the sun's rays; and the heat there is really great. The land is scorched; the vegetation is burnt up, and great parts of it are mere charred and arid wastes, with correspondingly chilly nights on account of the radiation.

Records of rainfall have only been kept of late years and then not in very many places. In a general way it may be said that in the Malay Peninsula the annual total is not far short of 100 inches and there may be rain at any time of the year. Elsewhere it holds by the regular monsoon period and in the north averages 60 inches and in central Siam and Bangkok about 50. Periodical deluges in eastern Siam make it a Serbonian bog.

Rice for Miles and Miles

The vegetation of Siam is entirely tropical, for the few summits that rise high enough to support plants of the temperate zone may be disregarded, but the varied character of the country helps to produce every kind of tree, bush and weed that may be expected in the tropics. The valleys and slopes of southern Siam are covered with a jungle so thick and rank that it baffles anything but an elephant; the mists and cloud-drift of the north are not less favourable to a lush growth.

Central Siam has, from times to which the memory of man runneth not to the contrary, been devoted to the cultivation of rice, and the uncompromising dead level is broken only by the almost continuous succession of villages, with their tufts of bamboos and palm-trees, clinging to the banks of the sluggish streams. Here and there stretches of jungle, where there has not been enough population to clear the land, show that

the wild growth could be as luxuriant as where the rainfall is greater.

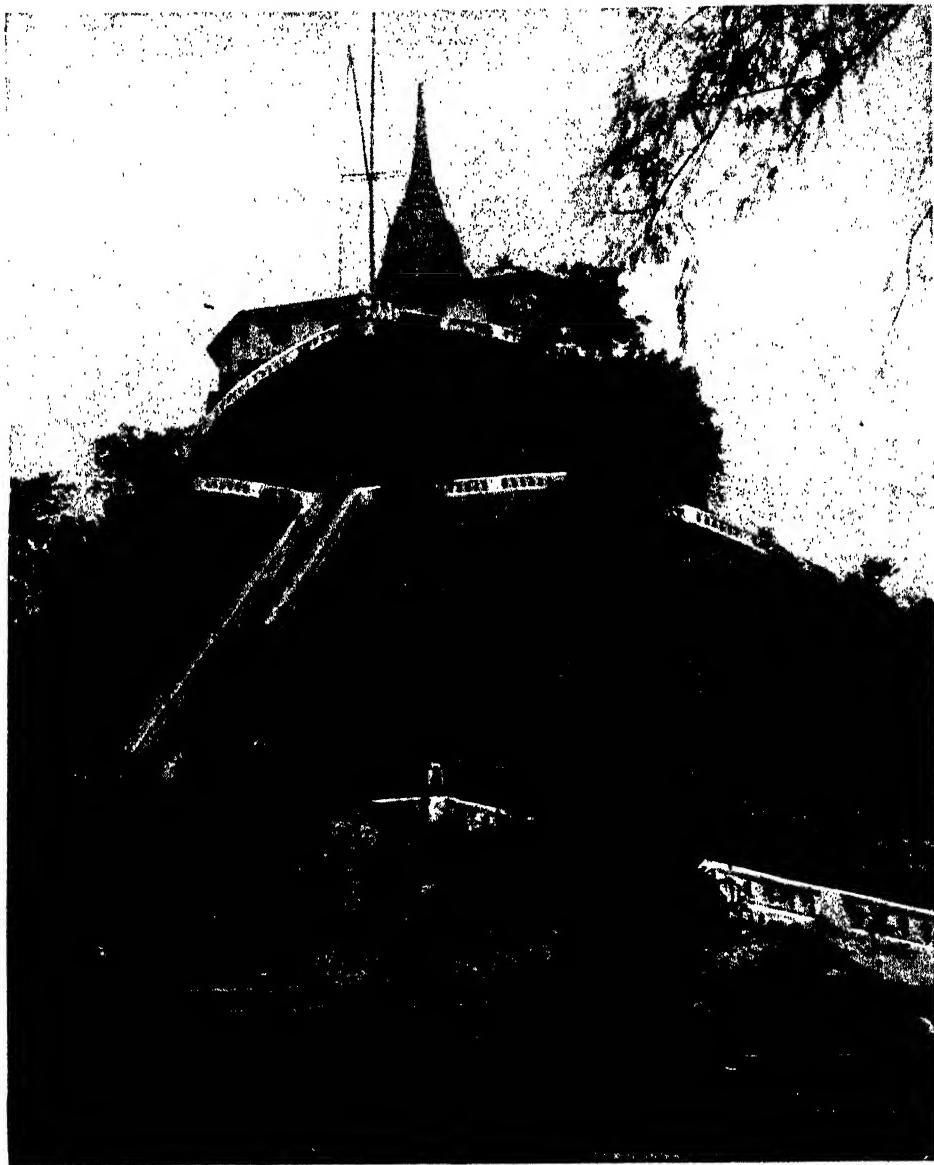
Eastern Siam is not inviting. The slopes on the laterite hills are sparsely covered with a thin and shadeless jungle of the kind called "in" in Burma, and the dusty flat lands are only of interest because they show how tropical rain-bursts can force up reeds and elephant grass in an incredibly short time into growth that could almost hide a pagoda. The river beds, arid sand for half the year, fill up into 30-foot-deep torrents which flood the countryside.

Forest of Twisted Mangroves

The forests of Siam, as well as the animals and birds, do not differ greatly from those of the countries round about, and there are no trees that seem peculiar to the country. The littoral forests, where the ground is muddy, are made up of the contorted mangroves, but the Siamese have not yet learnt to extract from them the cutch which planters in Borneo find profitable. Where the beach is sandy, or slightly rising, huge casuarinas take the place of the mangroves. Coconut palms grow freely in the south, but in central Siam the larva of the rhinoceros beetle has almost put an end to them.

Plant that Exterminates Weeds

The tropical evergreen forests are found all the way up the Malay Peninsula and on the western side toward Burma, and again to the east, northwards almost as far as Ubon. The most conspicuous trees are the buttress and the wood-oil trees, and rosewood, ebony and Brazil wood are common; the whole interlaced and bound together by creepers and by the spiky rattan. Climbing plants especially abound, and one in particular, of the passion-flower kind, has a great name as a weed killer and as a covering for the ground in rubber plantations. Gourd bearing plants are very common and of infinite variety: huge, diminutive, rough, smooth, sweet, sour, stumpy, filamentous, good to eat and rank poison.



E. N. A.

THE WAT SAKET ON ITS ROCKY EMINENCE AT BANGKOK

Many of the crumbling ruins of the Buddhist and Brahmano-Buddhist reliquary shrines in Siam are undoubtedly some of the oldest relics of man's handiwork in the country. This ancient phrachedi occupies a dominant position on a high hill at Bangkok; it is approached by a system of flights of steps and platforms, and affords magnificent views of the city and its environs.

The semi-temperate forests and the dry mixed forests connect with the deciduous forests of the north, where teak is the most valuable timber. Pine, oak and chestnut are also common and undergrowth is often absent, so that they are almost park-like. Orchids are found in them; but the finest and most striking belong to the laterite forests.

Trailing shaggy mosses flourish in the misty hills and fungi abound.

The fruits in general are those of the tropics, but the mangosteen and the durian belong almost entirely to Indo-China. There is undisputed praise for the mangosteen, which is claimed to be the most delicately flavoured of all fruits, as well as the most artistic looking

when split open. The durian is either much sought for or detested. Some detect liqueur and other attractive flavourings; others describe it as a garlic custard over a London sewer.

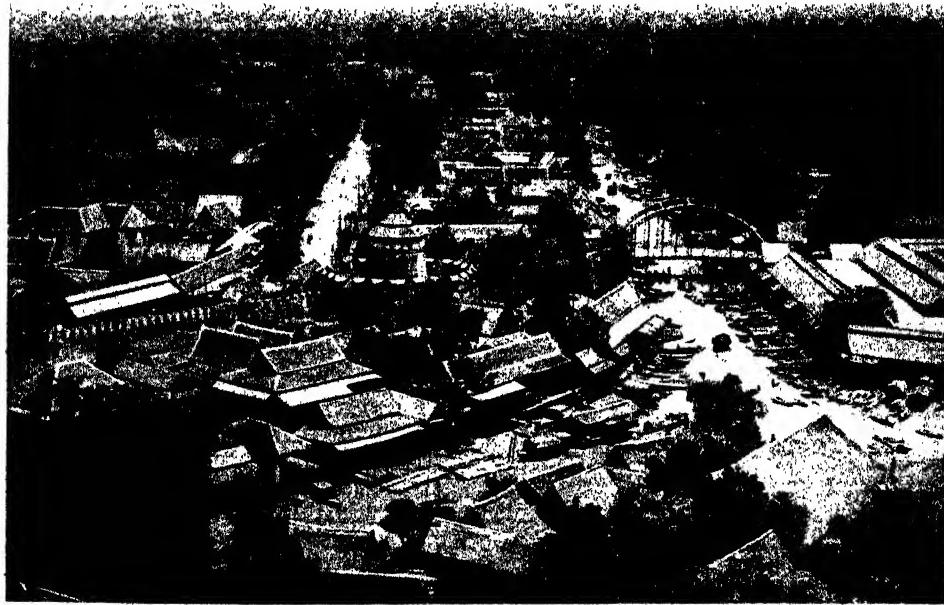
The tin of the Malay Peninsula has been known to the world for many centuries. Colonists, or merchant adventurers, came over and worked it before the Christian era. Europeans—Portuguese, Dutch and English—found Ujong Salang (Salong Cape) four hundred years ago, washed tin and called the island Junk Ceylon, a name it has kept ever since. The Chinese came later and took such entire possession, and made so much money, that the most enterprising of them made himself a rajah and established a dynasty. He called the town Tongka.

The Siamese call it Puket, and when the Federated Malay States to the south showed how profitable tin-mining was the government took over the administration and began collecting revenue. Mr. Warington Smyth, formerly director

of mines in Siam, says: "The whole island is a gigantic tin-mine. The granite of the hills is full of tin, the soil of the valleys is heavy with it. There is tin under the inland forests and tin beneath the sea."

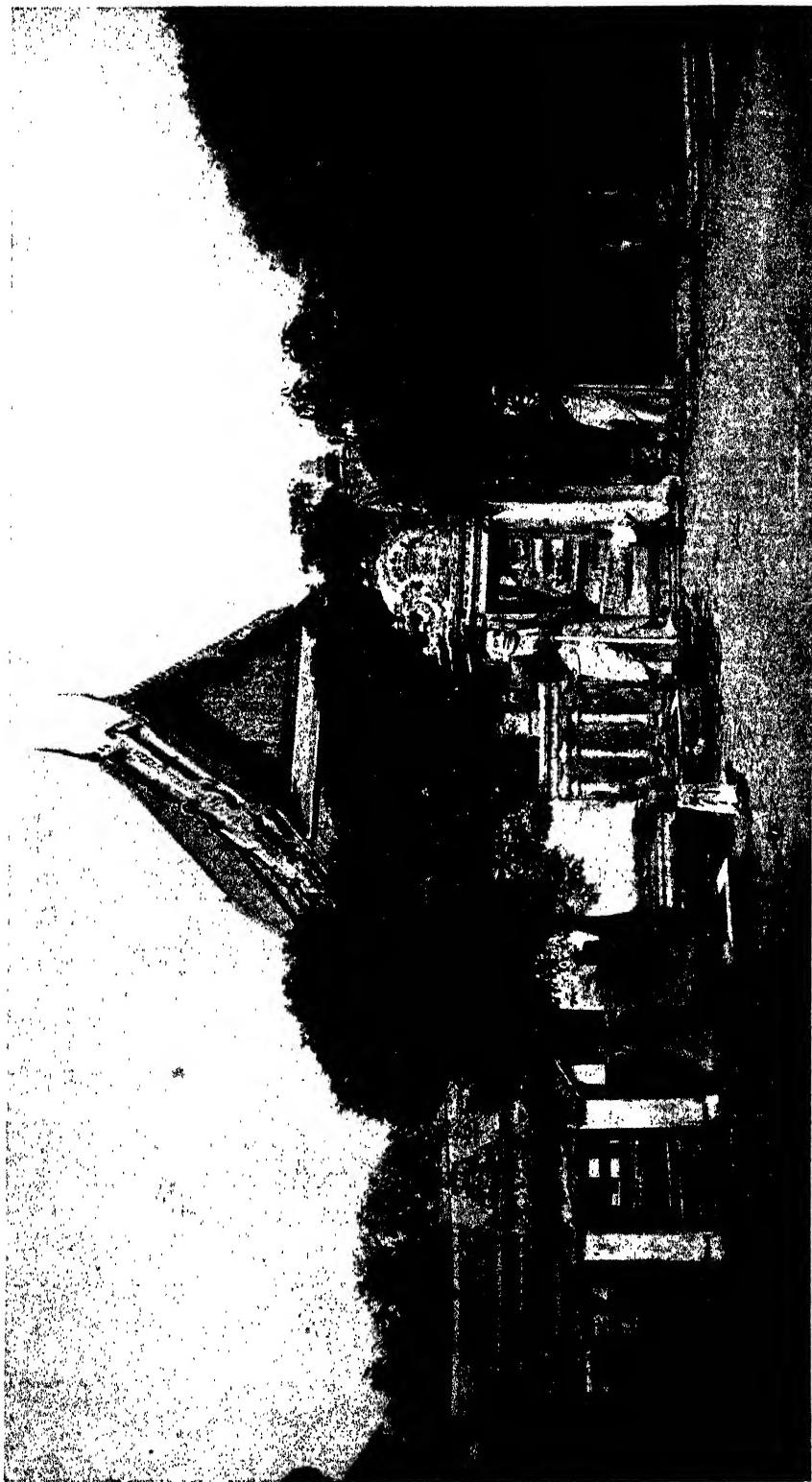
The Chinese used to work it open-cast and by puddling: they do so still, but scientific methods have been introduced by foreign merchants and an Australian company is dredging cassiterite out of Puket Bay. The Malay Peninsula hill ridge runs northwards into China and beyond, and tin and wolfram seem to be found throughout its length. Other metals, gold, iron, lead, copper and zinc, have been discovered, but are not systematically worked. There is coal, mostly lignite.

The gem workings of Chantabun (called by the Siamese Chantaburi) have a certain reputation, especially among British, Shans and Burmese. They have been worked for a long time, but are a little disappointing. Both rubies and sapphires are found, but deficiency



E. N. A.

OVERLOOKING BANGKOK, ITS MAIN STREET AND THE MENAM BRIDGE
Bangkok, Siam's capital and chief seaport, is situated astride the river Menam and threaded by canals. Consisting of a linked series of towns picturesquely set among a wealth of foliage and extending over an area of more than ten square miles, the city is a very attractive one, enjoying most of the modern conveniences of life, and carrying on a flourishing trade in teak, rice and ivory



COLOSSAL GUARDIAN FIGURES BESIDE A GATEWAY INTO THE WAT PO AT BANGKOK

Wat Po, situated by the great park about the summer palace, is one of the largest temple-monasteries in Siam. A high wall encloses the sacred precincts, and at the gateways are enormous statues. Some of the buildings, which show signs of neglect, have high-pitched, tiled roofs, carved overhanging eaves and elaborate ornamentation; the temples are surmounted by spires. Within the walls is a recumbent figure of Buddha, 175 feet in length, and covered with gold-leaf. Lining one of the long galleries there are scores of images of Buddha of various sizes, and in the grounds there are ponds containing crocodiles.



E N A

PORTERS AWAITING TRAVELLERS AT A BANGKOK LANDING STAGE

Nearly all the journeys and excursions which are made in other countries by road are made in Siam by water. At a very early age the Siamese youth—some children can swim almost before they can walk—is versed in the manipulation of boats of all sizes and types. Elaborate carving, a familiar feature of Siamese architecture, is not lacking even in this rude landing shelter.

of cobalt and chromium makes a considerable proportion of them short of the pigeon's-blood red and cornflower-blue so much desired. Garnets, topazes and corundum are also found.

Rice growing is the chief industry of the Siamese. Together with teak it produces a revenue of over £13,000,000 sterling, nine-tenths of the country's total, and only about £570,000 sterling of this comes from teak.

The teak industry has grown enormously since the closing of forests on

the annexation of Upper Burma brought European capital and methods into the Lao country in the north, where the teak forests are. It used to be worked by Chinamen, and they went stolidly forward cutting down everything and ruining the forests; now there is a Siamese forest department which conserves and plants and also girdles.

Girdling consists in killing the tree by cutting a circle through the bark down to the cambium. The tree is left to die and is then felled. To fell

green teak is a crime equivalent to shooting a fox in a hunting county. The logs are trimmed, stacked and dragged by elephants to the streams to be floated down when the rains come. A not inconsiderable number of logs comes down the Salween to Moulmein as well as by the Menam to Bangkok. The Mekong is useless for rafting.

Boat-building has dwindled to river boats, mostly of the dug-out type. In

capital, who brought skilled workmen from China. The original workmen died out; China flooded the market with similar work; and nowadays the craft is confined to earthenware again. Silk is produced and even woven, but it can hardly be called a regular industry.

The rivers and creeks are the great lines of communication. Outside Bangkok there are no roads worthy of the name; trade and travellers that cannot



O. A. FRY

CANAL SCENE IN THE NEIGHBOURHOOD OF BANGKOK

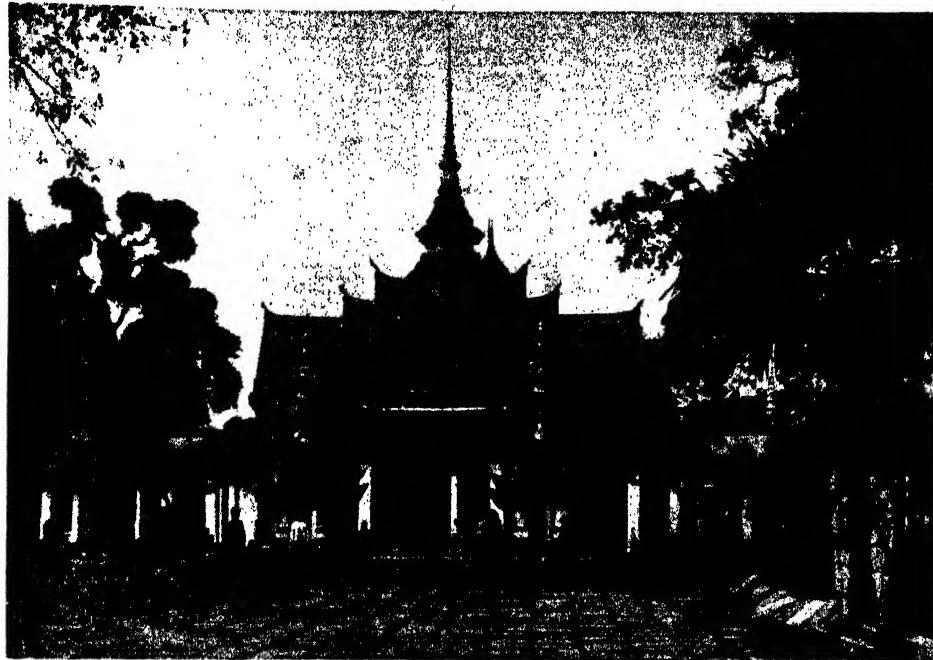
The vegetation which fringes the Menam and its different channels is very luxuriant. Bamboos and lofty palm-trees abound, often hiding the straggling houses which stud the banks; while here and there through the gaps the boatman obtains a vista of wide rice-lands, backed by an expanse of reeds and grass jungle, with perhaps a faint line of distant trees indicating another waterway

the spacious days of piracy the Malay Peninsula creek-dwellers built fast sailing-ships and long prahus that could ride rough seas; and more reputable people fitted out junks and other large craft on the Menam. Steam-launches have taken their place, bought elsewhere, and often of the type calculated to sell both boat and purchaser.

The art of pottery is nearly as old as the cultivation of rice. Sawankalok porcelain, moreover, is quite valuable. It was introduced by a king of that old

go by water follow bridle tracks and pack roads. These are very bad in the rains, but no one wants to travel then.

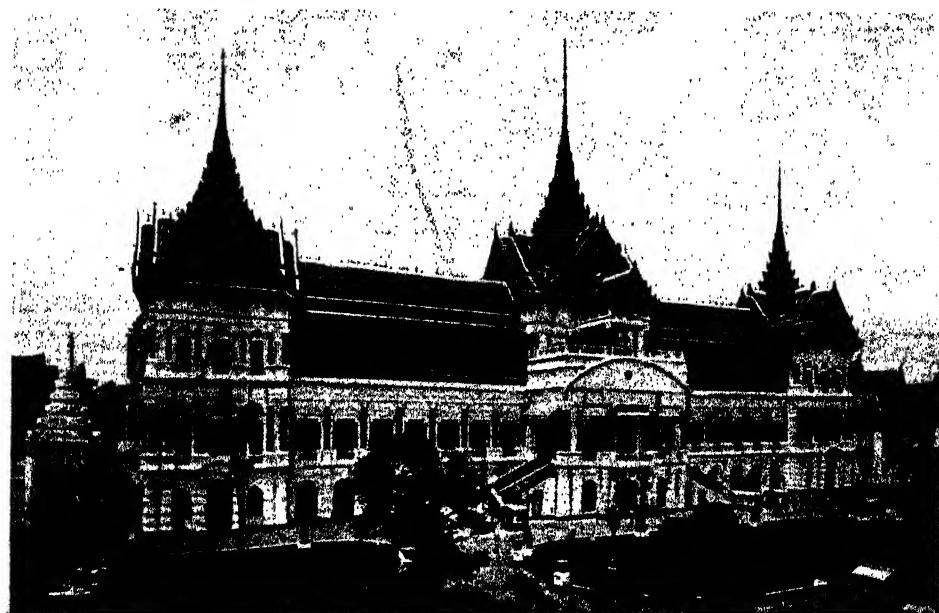
There has been very considerable railway construction since the beginning of the twentieth century. The first line was from Bangkok to Korat. There is talk of carrying this on to the Mekong. Other lines run from Bangkok through Paknampoh and Muang Prè up to Chieng-mai; and to the south the railway to Ratburi goes on down the Malay Peninsula past Chumpawn,



O. A. Ely

GIANT FIGURES GUARDING THE GATEWAY AT WAT CHANG

Siamese art is seen in all its crude attractiveness in and about the numerous temples and monasteries; and the inner walls of temples and the cloister walls which enclose the larger phrachedi are Siam's chief art galleries, for here are seen, frescoed in bright colours, many fanciful pictures of Buddhist mythology. Some highly decorative work is found at Wat Chang, a temple at Bangkok.



SECTION OF THE GRAND PALACE IN SIAM'S ROYAL CITY

After Ayuthia, the old capital, had been devastated by the Burmese, Bangkok became the headquarters of the Siamese army in 1782, and was definitely acknowledged the capital of the re-organized state. North of Bangkok is the beautiful Dusit park, containing the summer palace and many fine buildings, and connected with the grand palace and its gardens in the city by a long boulevard.

Singora and Patani and onwards, so that it is possible to go by train from Bangkok to Singapore. More enterprise on the part of the government of India might have led to connexion with Rangoon.

Aviation appeals to the Siamese as it does to the Burman, and there is an excellent aerodrome with a considerable fleet of aeroplanes. Both have been praised by gadabout European airmen.

There is practically only one town in the country, and Bangkok is as elusive and baffling as the Siamese race itself. It is the proper thing for a Siamese to say that it is the biggest city in Farther India, and that it has a population of 630,000, but contentious and disagreeable people say that it ought to be defined. The capital is a narrow strip, mostly nothing like a mile wide, along the banks of the Menam. It begins at or below Krung Tep, the "Heavenly Royal City" itself, and according to the inhabitants runs up to Ayuthia Krung Kao, the "Old Capital," 40 miles away.

But some dispute this, and say that the greater part is a herbaceous border, made up of villages jostling into one another. There is a great maze of canals and creeks which induced the allusive to call it the Eastern Venice, and for long the banks were lined with floating houses built on pontoons. There are still not a few, and once there was even a foreign legation housed in this way. Now, however, there are 80

miles of good roads palpitating with motor-cars, especially in the five-mile-long narrow main street which once was the only road in the place.

The city swarms with Chinamen; one might say is infested, for a great many of them keep gambling and opium houses, drinking dens and pawnshops, but there are very many others who are industrious and prosperous and bring a great deal of money into the country. With its pagodas or "wats" it is a very picturesque city, but it is one to visit, not to stay in.

There are now a number of artesian wells, but at one time Europeans had to collect rain-water off the roofs in the wet season and store it in Ali Baba jars for all domestic purposes. The Menam is rather dirtier than most Eastern rivers, and often has repulsive things floating on it. The home-born citizens drink it, and there was an ancient mariner, an Englishman, who ran the Siamese navy and prided himself on using Menam water for all house purposes; but he boiled it and used the precipitate for growing crotonts.

Bangkok, the greater Bangkok, contains a ninth of the population of the kingdom. If 50,000 is the qualification for a town, there are no others in the country. Chiengmai, the teak trade centre, and Puket, the metropolis of the tin-miners, have each 30,000. The rest, Chantabun, Petriu, Korat, are swollen villages, sordid but cheerful.

SIAM : GEOGRAPHICAL SUMMARY

Natural Division. An alluvial lowland filled in between the high backbone of Malaya and the old ridges of Indo-China; the areas of land, which is Siam, and of sea, the Gulf of Siam, are controlled entirely by the general level of the ocean. The west is the basin of the Menam, the east comprises part of that of the Mekong.

Climate. As part of south-east Asia, Siam is usually said to have a monsoon climate, as that of India and Burma, with the three seasons—the hot, the wet monsoon (June–October), and the dry and cool. But the monsoon winds are not universal, and eastern Siam has the arid, sun-scorched characteristics of Rajputana, with floods on the rivers as on the Indus.

Vegetation. Tropical. Hardwood forests (teak) on the slopes (cf. the Himalayas), mangrove-lined coasts and jungle swamps. Central Siam has the stoneless alluvium of the United Provinces, with a cleared surface devoted to tillage.

Products. Rice for home use and export, (cf. Burma), tin (cf. Malaya), teak.

Communications. No roads, only bridle tracks for use in the dry seas. Rivers. A growing railway system connected with Singapore through Malaya.

Outlook. The Siamese are a self-centred people, whose resources are exploited by the foreign trader, planter and mining engineer, who may be Chinese, European or Australian.



